United States Court of Appeals
for the Second Circuit

EXHIBITS

ORIGINAL

77-6148, 6154

B

United States Court of Appeals

FOR THE SECOND CIRCUIT

DUPONT GLORE FORGAN INCORPORATED, *et al.*,
Plaintiffs-Appellants,

—against—

AMERICAN TELEPHONE AND TELEGRAPH COMPANY, *et al.*,
Defendants and Third-Party Plaintiffs-Appellees-Appellants,

P/S

—against—

UNITED STATES OF AMERICA,
Third-Party Defendant-Appellee.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

UNITED STATES COURT OF APPEALS
FILED
DEC 5 1977
A. DANIEL FUSARO, CLERK
SECOND CIRCUIT

EXHIBIT VOLUME

VOLUME 1 of 3
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KRAMER, LOWENSTEIN, NESSEN,
KAMIN & SOLL
Attorneys for Plaintiffs-Appellants
919 Third Avenue
New York, New York 10022
(212) 688-1100

DAVIS POLK & WARDWELL
Attorneys for Defendants and Third-Party Plaintiffs-Appellees-Appellants
1 Chase Manhattan Plaza
New York, New York 10005
(212) HA 2-3400

WILLIAM M. TENDY, ESQ.
Acting United States Attorney
Attorney for Third-Party Defendant-Appellee
1 St. Andrew's Plaza
New York, New York 10007
(212) 791-0054

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EXHIBIT 1A
License Agreement between AT&T
and Southwestern Bell

USA 3[illegible] - 475
(ED. 4-23-71)

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

1A

FPI-MI—9-24-75-50M-4417

Agreement

BETWEEN

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND

SOUTHWESTERN BELL TELEPHONE COMPANY

Covering Services, Licenses and Privileges.

September 26, 1930.

Amended Apr. 26, 1963.

Exhibit 1A

This Agreement, dated this 26th day of September, 1930, between **American Telephone and Telegraph Company**, a corporation of the State of New York, hereinafter called the "Licensor", and **Southwestern Bell Telephone Company**, a corporation of the State of Missouri, hereinafter called the "Licensee";

Witnesseth:

Whereas, the Licensee as an Associated Company of the Bell System has been and is now conducting a telephone business within the territory hereinafter defined under a certain license contract with the Licensor, particularly as evidenced by memorandum thereof dated December 22, 1925, and supplements thereto; and

Whereas, the agreement of the parties hereto that telephones manufactured under the patents of the Licensor shall be purchased by the Licensee for use within said territory rather than furnished and repaired as theretofore by the Licensor makes it desirable to state and reaffirm in this instrument the license and service contract relations which continue in force between them.

Now, therefore, in consideration of the premises and of the covenants and agreements herein set forth, the parties hereto agree as follows:

1. For the purposes of this agreement:

(a) The telephone business of the Licensee is the furnishing to the public for compensation of telephone service within the territory of the Licensee as hereinafter defined.

(b) An exchange means a system established to provide telephonic communication within a particular area usually within or embracing a city, town or village and environs. This system consists of one or more central offices together with the associated plant including circuits, equipment and telephones.

(c) The term "exchange service" applies to telephone service within an exchange area.

(d) The term "toll service" applies to telephone service between exchange areas.

2. The Licensee is licensed to use within its territory all telephones and all telephonic devices, apparatus, methods and systems needed for its business as defined herein which are covered by patents now or hereafter owned or controlled by the Licensor or which it may have the right to authorize the Associated Companies of the Bell System to use; but no such telephones, telephonic devices, apparatus, methods or systems shall be disposed of by the Licensee without the consent of the Licensor except to those licensed by the Licensor to use them or to manufacturers licensed by the Licensor.

The Licensee shall be protected and saved harmless by the Licensor from all actions or suits charging infringement of patents arising from the use of any telephone or telephonic devices, apparatus, methods or systems which the Licensor may recommend.

All rights not specifically granted to the Licensee remain to the Licensor.

3. The Licensor will prosecute continuously fundamental work of research, investigation and experimentation in the development of the art and science of telephony and in the development of plans, methods, systems and ideas designed to improve telephone service and to promote safety, economy and efficiency in the equipment, construction and operation of the telephone plants of the Associated Companies of the Bell System, and will direct development work by others for the production of materials and apparatus necessary for rendering the products of such work of the Licensor available for use by such Associated Companies.

Exhibit 1A

The Licensee shall have the right to use and the Licensor will render available for use by the Associated Companies of the Bell System as and when completed and standardized all products of the Licensor's fundamental work of research, investigation and experimentation, and all inventions, discoveries and patents, and all methods and systems covered by patents needed for the said business of the Licensee, and all apparatus and appliances, methods and systems embodying such inventions, discoveries and patents, and to this end, if any patent rights held by others in any such invention or discovery are necessary to make such invention or discovery available for such use, the Licensor will, in case such invention or discovery relates to telephones, acquire the requisite patent rights therein, and, in case such invention or discovery relates to other than telephones, provide suitable arrangements for making the apparatus, appliances, methods and systems embodying such invention or discovery available for use as aforesaid; provided that each such acquisition or arrangement can, in the judgment of the Licensor, be consummated on reasonable terms.

4. The Licensor will make and maintain continuously in effect adequate arrangements whereby telephones and other telephonic devices and apparatus needed for the business of the Licensee may be manufactured under all patents now or hereafter owned or controlled by the Licensor, or under which it may have the right to grant licenses to others, and whereby the Licensee may purchase such telephones, telephonic devices and apparatus for use in its territory and subject to the provisions hereof, at prices which shall be reasonable and not higher than the lowest prices charged by the manufacturer from time to time to others under similar circumstances.

5. The Licensor will furnish to the Licensee

(a) Advice and assistance in general engineering, plant, traffic, operating, commercial, accounting (includ-

Exhibit 1A

ing the auditing of accounts), patent, legal, administrative and other matters pertaining to the efficient, economical and successful conduct of said business of the Licensee; such advice and assistance to be given by the Licensor through conferences with its specialists and the issuance to the Licensee of data and conclusions, including bulletins, books, circular letters, and standard specifications and drawings, and through the performance of specific work in cases of unusual magnitude and complexity where such work is necessary or desirable.

(b) Advice and assistance in any financing required to be done by the Licensee in the extension, development or improvement of its telephone system within its said territory and in the general matter of its finances; aid in securing funds on fair terms, as and when needed for new construction and other expenditures, but not, at any time, to a greater extent than the then condition of the finances and credit of the Licensor may permit; active assistance in the marketing of the Licensee's securities; and such other necessary financial support and assistance in the premises as will tend to serve the best interests of both Companies.

(c) Active assistance, cooperation and support in connection with the adoption from time to time by the Licensee of such measures as will, in the judgment of the parties hereto, best protect and preserve the health and promote the well-being in employment of the employees of the Licensee and, in other ways, conserve the high quality of its service to the public through the maintenance of a stable, contented and efficient personnel.

6. The Licensor will maintain continuously an organization of specialists trained in the various branches of the work required to be done by the Licensor in rendering the foregoing services, of such numbers and possessed of such technical knowledge and experience as will enable said work to be so done as to relieve the Licensee from the necessity of attempting to perform said work for itself.

7. The Licensor will maintain continuously or cause to be so maintained proper connections between the telephone system of the Licensee and the telephone systems of the other Associated Companies of the Bell System and between places within the territory of the Licensee which the latter is not authorized to connect.

8. The Licensee shall have the right

(a) To extend to the subscribers and other patrons of the Licensee and of its connecting companies within its said territory the privilege of using, upon payment of the regular tolls therefor, the connections herein provided between its telephone system and the telephone systems of the other Associated Companies of the Bell System for telephonic communication between such subscribers and other patrons and the subscribers and other patrons of such Associated Companies and of their connecting companies in their respective territories.

(b) For the betterment of the service throughout its said territory, to extend to its connecting companies within its said territory, on such terms and conditions as it may determine, the benefit of such engineering and other technical advice and information with respect to construction, maintenance, repair and operation of plant as the Licensee may receive from the Licensor.

The Licensee shall not directly or indirectly connect with the lines of the Licensor or its appointees any telephone facilities which in the judgment of the Licensor would unduly impair the quality of the service.

9. The Licensee may enjoy any of the rights of way and similar franchises of the Licensor to construct and maintain lines, which the Licensor can permit it to use, when and so long as, in the judgment of the Licensor, it shall not interfere with the enjoyment thereof by the Licensor or its other licensees, and may, to the extent and under the conditions aforesaid, use the Licensor's overhead and underground facilities for supporting or carrying wires (both open and in cable) upon paying a

pro rata share of the cost of constructing and maintaining them, computed in accordance with the then existing practices of the parties, or such other reasonable compensation as may be agreed upon. For trunk lines from the several exchange offices to points outside of the respective exchanges, the Licensor may enjoy all rights of the Licensee to construct and maintain lines which the Licensee can permit it to use, when and so long as, in the judgment of the Licensee, it shall not interfere with the enjoyment thereof by the Licensee or its other Licensees, and may, to the extent and under the conditions aforesaid, use the Licensee's overhead and underground facilities for supporting or carrying the Licensor's wires (both open and in cable) upon paying a pro rata share of the cost of constructing and maintaining them, computed in accordance with the then existing practices of the parties, or such other reasonable compensation as may be agreed upon. The Licensor reserves the right to use telephones on lines connecting places in the territory of the Licensee with other places in said territory which the Licensee is not authorized to connect hereunder or with places outside said territory, or connecting places outside said territory with each other. The Licensee will allow the Licensor to connect the wires of any such lines with its said lines in order to constitute thereby a through line, of which the Licensee's lines or any part of them can form a portion or link, in order to forward through communications or messages; will make or permit to be made convenient switchboard or other connections for that purpose, and as compensation for such use of its lines and for making such connections will take a share of the through toll (terminal expenses being first deducted) pro rata according to distance, and will also allow any telephone exchange located outside the territory of the Licensee to be designated by the Licensor to connect with the Licensee's lines for the purpose and substantially in the manner and upon the terms herein provided in respect of such trunk line connections.

In respect of all communications or messages originating on its lines and which are to be routed or forwarded over any lines of the Licensor or its appointees, the Licensee shall require the patron or subscriber to bind himself to pay the tolls thereon and to make every communication or message subject to such contracts, stipulations, and limitations of liability as the Licensor may from time to time require, in such form as it may from time to time prescribe, and will hold the Licensor harmless from all loss or expense consequent upon the Licensee's failure so to do. Whenever the consent of a commission or other public tribunal to the use by the Licensor or the Licensee of the plant or other facilities of the other is required by law, no agreement made under and pursuant to the provisions of this paragraph shall be effective until such consent is obtained.

The Licensor may enter the offices and connect with the exchanges of the Licensee any lines to points without the territory of the Licensee or to points within said territory which the Licensee is not authorized to connect, in order to establish communication between patrons of such exchanges and parties at such points reached by said lines, and may there operate said lines with suitable appliances; the Licensee will permit its patrons to use such lines and by its own operators will handle such communications or messages to and from its patrons, or make the proper switchboard or other connections for direct communication, as may be requested, and in such manner, not inconsistent with the proper conduct of its office, as the Licensor shall direct. But if the Licensor is not satisfied with the manner in which it is performed, it may establish its own offices and trunk and radiating lines for such purpose.

10. The Licensee will cause each of its exchanges to route, over the lines of the Licensor and of such parties as the Licensor may from time to time appoint, all communications to points outside the Licensee's territory, or

Exhibit 1A

to points within said territory which the Licensee is not authorized to connect, originating at such exchanges, on its lines, or at the exchanges or on the lines of its connecting companies within its territory, or coming on the wires or within the control of the exchange, where the Licensor or its said appointee has wires and will accept the communications, so far as the Licensee can lawfully control the same and unless otherwise specially directed by its patrons, but the Licensee will not solicit such special directions or receive or pay tolls for transmission over other lines unless compellable by law so to do. Each such communication on which the charge is reversed shall be considered as originating at the station against which the charge is to be made.

The Licensee shall keep and furnish an account of each such communication, and shall collect and on demand pay over to the Licensor or its said appointees, respectively, the tolls for transmission beyond the exchange, according to such rates and rules as each shall establish, and shall exhibit its accounts and the tickets from which they are made, so far as may be proper to verify the same. The Licensee, in the handling of all business interchanged hereunder shall observe the Licensor's operating methods and rules from time to time established for the use of its lines and shall keep such records and furnish such reports with respect thereto as the Licensor may from time to time reasonably request.

Each exchange shall, if and when so requested by the Licensor, make proper switchboard or other connection between the lines of the Licensor or its Licensees from points without such exchange and terminating in such exchange office, for the purpose thereby of making up a through line between points without such exchange. In respect of all the business referred to in this Article, the Licensee shall make no charge to its own subscriber or patron, but shall be entitled to the following compensation and none other: Upon communications originat-

Exhibit 1A

ing at an exchange or toll station of the Licensee or of a connecting company of the Licensee within its territory and passing over the lines of the Licensor or its appointees, compensation based upon the average revenue per originating message in accordance with the schedule of commissions set forth in Appendix A hereto attached and made part hereof; said compensation to cover the use of the necessary switchboard and trunking and other toll terminal plant and facilities and all the facilities and services of an exchange furnished for and in connection with such communications whether to or from such exchange, except the exchange service facilities required to establish connection between an exchange station and the toll terminal plant, for the use of which excepted facilities the Licensee is compensated by its rates for exchange service in such exchange. In case an exchange shall be required to make a switchboard connection for the purpose of making up a through line between points without such exchange, the exchange shall receive, for making such connection, such compensation as may be agreed upon.

11. In consideration of the premises and for all benefits accruing to the Licensee hereunder, the Licensee shall pay to the Licensor a sum equal to two and one-half per cent. (2½%) of the total gross earnings of the Licensee, which shall be payable in monthly installments, as herein provided, and in accordance with the established practice of the parties hereto, and shall be computed as follows: Such total gross earnings shall be computed by adding the following accounts described and defined in the Uniform System of Accounts for Telephone Companies prescribed by the Interstate Commerce Commission: Account 500 Subscribers' Station Revenues, Account 501 Public Pay Station Revenues, Account 504 Private Exchange Lines, and Account 510 Message Tolls, and by deducting from the total thereof, Account 304 Uncollectible Operating Revenues. To such gross earnings of the Licensee there shall be added an amount equal to

the gross earnings, similarly computed, for each other telephone company operating in the territory of the Licensee in which the Licensee owns a majority either of the voting stock or of the entire capital stock; provided, however, that on application by the Licensee for the exclusion of all or any portion of such gross revenues of any such operating company the question shall be carefully considered and determined.

The amount of each installment of said sum equal to two and one-half per cent. (2½%) of the Licensee's total gross earnings due for each month shall be determined by such total gross earnings of the second preceding month, computed in the manner aforesaid, and a statement, over the signature of the proper accounting officer of the Licensee, of its total gross earnings for each calendar month, computed in the manner aforesaid, shall be sent to the Comptroller of the Licensor, or to such other officer of the Licensor as it may theretofore designate, on or before the twenty-fifth day of the next succeeding month and payment in New York funds shall be made on or before the tenth day of the month next following, that being the month for which such payment is due.

The Licensee will make such reports, giving such information regarding the operations of its exchanges and lines as the Licensor may from time to time reasonably request.

12. If the Licensee shall fail to pay any sums due hereunder for thirty days after the same shall become payable or shall violate any other term or condition of this agreement and shall fail to remedy or repair the same for sixty days after written notice thereof from the Licensor, the Licensor may, if it shall so elect, by written notice to Licensee, terminate the rights of the Licensee hereunder and may resort to any of its rights and remedies in law or in equity under the patent laws or otherwise, including the remedy by injunction against the Licensee or those claiming under it.

13. The contractual relations hereunder are personal to the Licensee, and any assignment or attempt to assign its rights hereunder or the lines established hereunder or any of them, by act of the party or operation of law, without the written consent of the Licensor, will be good ground for a cancellation hereof by the Licensor. Whenever the Licensor grants to others the rights for exchanges or any of its rights under Articles 9 and 10 hereof or for connecting lines or any other rights remaining to it, the stipulations hereof relating thereto shall be binding upon and inure to the benefit of such grantees, and the Licensor shall not be responsible for their acts or defaults. If the Licensor shall transfer to any party who shall agree to perform the stipulations hereof its title to the patent rights under which telephones and apparatus are licensed herein, and its then existing rights hereunder, the provisions hereof shall inure to the benefit of and be binding upon such party in respect of all things done or to be done after such assignment, as if it were named a party hereto, and the Licensor shall no longer be responsible hereunder.

14. The rights of the Licensee hereunder shall be perpetual, unless determined as herein provided.

15. The territory of the Licensee hereunder is as follows, viz.:

The States of Arkansas, Kansas, Missouri and Oklahoma; the State of Texas with the exception of the County of El Paso therein; and in the State of Illinois, the Counties of Monroe and St. Clair and the Township of Venice in the County of Madison; provided, however, that the Licensor retains its exclusive rights to use telephones to transact toll business passing in whole or in part over its through lines as now or hereafter constructed, between the following points, to wit:

(1) Between all points in the States of Missouri, Kansas, the Counties of Monroe and St. Clair and the

Township of Venice in Madison County, Illinois, and all points in the State of Texas.

(2) Between St. Louis and Little Rock, Muskogee, Tulsa, Oklahoma City, Wichita, and points beyond.

(3) Between Kansas City and Oklahoma City, Tulsa, Muskogee, Little Rock, and points beyond.

In witness whereof, the parties hereto have caused their respective corporate seals to be hereto affixed and these presents to be subscribed in their names and behalf by their respective officers thereto duly authorized.

American Telephone and Telegraph Company,

C. M. B.

By C. P. Cooper,
Vice President.

(corporate seal)

Attest:

A. A. Marsters,
Secretary.

Southwestern Bell Telephone Company,

By A. B. Elias,
President.

(corporate seal)

Attest:

J. P. Crowley,
Secretary.

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Exhibit 1A

APPENDIX "A".

Average Revenue Per Out Message		*Messages from offices where the Toll Operating is done by*	
Over	*But Not Over*	*American Co. Commission per Out Message*	*Associated Co. Commission per Out Message*
	$.75	$.112	$.290
$.75	.80	.113	.295
.80	.85	.114	.300
.85	.90	.115	.305
.90	.95	.116	.310
.95	1.00	.117	.315
1.00	1.05	.118	.320
1.05	1.10	.118	.325
1.10	1.15	.119	.330
1.15	1.20	.119	.335
1.20	1.25	.120	.340
1.25	1.30	.120	.345
1.30	1.35	.121	.350
1.35	1.40	.121	.355
1.40	1.45	.122	.360
1.45	1.50	.122	.365
1.50	1.60	.123	.370
1.60	1.70	.124	.375
1.70	1.80	.125	.380
1.80	1.90	.126	.385
1.90	2.00	.127	.390
2.00	2.12½	.129	.400
2.12½	2.25	.129	.400
2.25	2.37½	.131	.410
2.37½	2.50	.131	.410
2.50	2.75	.132	.415
2.75	3.00	.133	.420
3.00	3.25	.134	.425
3.25	3.50	.135	.430
3.50	3.75	.136	.435
3.75	4.00	.137	.440
4.00	4.50	.138	.450
For each increase of .50 add		.001	.005

Exhibit 1A

AGREEMENT OF AMENDMENT

This Agreement, dated this 26th day of April, 1963, between American Telephone & Telegraph Company, a corporation of the State of New York, and Southwestern Bell Telephone Company, a corporation of the State of Missouri, witnesseth:

The Agreement between the parties hereto dated September 26, 1930, covering Services, Licenses and Privileges is hereby amended as follows:

1. By deleting Article 7 and substituting in its place the following:

> "7. The Licensor will maintain continuously or cause to be so maintained proper connections between the telephone system of the Licensee and the telephone systems of the other Associated Companies of the Bell System (except for wholly intrastate connections).

2. By deleting Article 15 and substituting in its place the following:

> "15. The territory of the Licensee hereunder is as follows, viz.:
>
> > "The States of Arkansas, Kansas, Missouri and Oklahoma; the State of Texas with the exception of the County of El Paso therein; and in the State of Illinois, the Counties of Monroe and St. Clair and the Township of Venice in the County of Madison."

In Witness Whereof, the parties hereto have caused their respective seals to be hereto affixed and these

Exhibit 1A

presents to be subscribed in their names and behalf by their respective officers thereto duly authorized.

American Telephone & Telegraph Company,

By /s/ L. F. Wingert
Vice President

(Seal)

Attest:

/s/ A. G. Barry
Secretary

Southwestern Bell Telephone Company,

By /s/ E. M. Clark
President

(Seal)

Attest:

/s/ R. L. Bankson
Secretary

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Exhibit 1A

COPY

September 30, 1948

Dear Mr.

This is to advise you that, effective as of October 1, 1948 and continuing until further notice, the American Telephone and Telegraph Company will accept as payment for its services under the License Contract 1% of the total gross earnings provided in the contract, computed however by adding Accounts 500 through 516 and deducting from the total thereof Account 530.

Sincerely yours,

(Sgd.) LEROY A. WILSON

To all Presidents.

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Exhibit 1A

COPY

January 2, 1951

Mr. J. E. Harrell, President
New England Telephone and Telegraph Company
Boston 7, Massachusetts

Dear Mr. Harrell:

One of the provisions of the license service contract between your Company and ours is that no telephone apparatus which you are licensed to use shall be disposed of without our consent, except to other licensee companies.

We have recently made a review of all the cases for a number of years in which the Associated Companies have requested permission to sell apparatus licensed by us, and find no instance where consent to make the sale has been withheld.

Since no practical purpose would be served by continuing the submission of such cases, you need not hereafter submit to us any disposition which you wish to make of apparatus licensed under the license service contract.

Sincerely yours,

/s/ G. L. Best

Vice President

(similar letter to the President
of each Associated Company except
Bell of Canada)

E19
EXHIBIT 1B
License Agreement between AT&T
and Pacific Northwest

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
1B
FPI-MI--9-24-71-50M-4417

Agreement

BETWEEN

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND

PACIFIC NORTHWEST BELL TELEPHONE COMPANY

Covering Services, Licenses and Privileges.

July 1, 1961

E20
Exhibit 1B

LICENSE CONTRACT

THIS AGREEMENT, dated, the 1st day of July, 1961, between AMERICAN TELEPHONE AND TELEGRAPH COMPANY, a corporation organized under the laws of the State of New York (hereinafter called the "Licensor"), and PACIFIC NORTHWEST BELL TELEPHONE COMPANY, a corporation organized under the laws of the State of Washington (hereinafter called the "Licensee")

WITNESSETH:

WHEREAS, the Licensee has been formed for the purpose of conducting a telephone business, within the territory hereinafter defined, as an Associated Company of the Bell System, with license and service contract relations with the Licensor,

NOW, THEREFORE, in consideration of the premises and of the covenants and agreements herein set forth the parties hereto agree as follows:

1. For the purposes of this agreement, the telephone business of the Licensee is the furnishing to the public for compensation of telephone service within the territory of the Licensee as hereinafter defined.

2. The Licensee is licensed to use within its territory all telephones and all telephonic devices, apparatus, methods and systems needed for its business as defined herein which are covered by patents now or hereafter owned or controlled by the Licensor or which it may have the right to authorize the Associated Companies of the Bell System to use.

The Licensee shall be protected and saved harmless by the Licensor from all actions or suits charging infringement of patents arising from the use of any telephones or telephonic devices, apparatus, methods or systems which the Licensor may recommend.

All rights not specifically granted to the Licensee remain to the Licensor.

3. The Licensor will prosecute continuously fundamental work of research, investigation and experimentation in the development of the art and science of telephony and in the development of plans, methods, systems and ideas designed to improve telephone service and to promote safety, economy and efficiency in the equipment, construction and operation of the telephone plants of the Associated Companies of the Bell System, and will direct develop-

ment work by others for the production of materials and apparatus necessary for rendering the products of such work of the Licensor available for use by such Associated Companies.

The Licensee shall have the right to use and the Licensor will render available for use by the Associated Companies of the Bell System as and when completed and standardized all products of the Licensor's fundamental work of research, investigation and experimentation, and all inventions, discoveries and patents, and all methods and systems covered by patents needed for the said business of the Licensee, and all apparatus and appliances, methods and systems embodying such inventions, discoveries and patents, and to this end, if any patent rights held by others in any such invention or discovery are necessary to make such invention or discovery available for such use, the Licensor will, in case such invention or discovery relates to telephones, acquire the requisite patent rights therein, and in case such invention or discovery relates to other than telephones, provide suitable arrangements for making the apparatus, appliances, methods and systems embodying such invention or discovery available for use as aforesaid; provided that each such acquisition or arrangement can, in the judgment of the Licensor, be consummated on reasonable terms.

4. The Licensor will make and maintain continuously in effect adequate arrangements whereby telephones and other telephonic devices and apparatus needed for the business of the Licensee may be manufactured under all patents now or hereafter owned or controlled by the Licensor, or under which it may have the right to grant licenses to others, and whereby the Licensee may purchase such telephones, telephonic devices and apparatus for use in its territory and subject to the provisions hereof, at prices which shall be reasonable and not higher than the lowest prices charged by the manufacturer from time to time to others under similar circumstances.

5. The Licensor will furnish to the Licensee

(a) Advice and assistance in general engineering, plant, traffic, operating, commercial, accounting (including the auditing of accounts), patent, legal, administrative and other matters pertaining to the efficient, economical and successful conduct of said business of the Licensee; such advice and assistance to be given by the Licensor through conferences with its specialists and the issuance to the Licensee of data and conclusions, including bulletins, books, circular letters, and standard specifications and

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Exhibit 1B

drawings, and through the performance of specific work in cases of unusual magnitude and complexity where such work is necessary or desirable.

(b) Advice and assistance in any financing required to be done by the Licensee in the extension, development or improvement of its telephone system within its said territory and in the general matter of its finances; aid in securing funds on fair terms, as and when needed for new construction and other expenditures, but not at any time, to a greater extent than the then condition of the finances and credit of the Licensor may permit; active assistance in the marketing of the Licensee's securities; and such other necessary financial support and assistance in the premises as will tend to serve the best interests of both Companies.

(c) Active assistance, cooperation and support in connection with the adoption from time to time by the Licensee of such measures as will, in the judgment of the parties hereto, best protect and preserve the health and promote the well-being in employment of the employees of the Licensee and, in other ways, conserve the high quality of its service to the public through the maintenance of a stable, contented and efficient personnel.

6. The Licensor will maintain continuously an organization of specialists trained in the various branches of the work required to be done by the Licensor in rendering the foregoing services, of such numbers and possessed of such technical knowledge and experience as will enable said work to be so done as to relieve the Licensee from the necessity of attempting to perform said work for itself.

7. The Licensee shall have the right

(a) To extend to the subscribers and other patrons of the Licensee and of its connecting companies within its said territory the privilege of using, upon payment of the regular tolls therefor, connections maintained or caused to be maintained by the Licensor between the telephone system of the Licensee and the telephone systems of the other Associated Companies of the Bell System for telephonic communication between such subscribers and other patrons and the subscribers and other patrons of such Associated Companies and of their connecting companies in their respective territories.

(b) For the betterment of the service throughout its said territory, to extend to its connecting companies within its said territory, on such terms and conditions as it may determine, the benefit of such engineering and other technical advice and information with respect to construction, maintenance, repair and operation of plant as the Licensee may receive from the Licensor.

The Licensee shall not directly or indirectly connect with the lines of the Licensor or its appointees any telephone facilities which in the judgment of the Licensor would unduly impair the quality of the service.

8. In consideration of the premises and for all benefits accruing to the Licensee hereunder, the Licensee shall pay to the Licensor a sum equal to two and one-half per cent (2½%) of the total gross earnings of the Licensee, which shall be payable in monthly installments, as herein provided, and in accordance with the established practice of the parties hereto, and shall be computed as follows: Such total gross earnings shall be computed by adding the following accounts described and defined in the Uniform System of Accounts for Telephone Companies prescribed by the Federal Communications Commission: Account 500 Subscribers' station revenues, Account 501 Public telephone revenues, Account 504 Local private line services, and Account 510 Message tolls, and by deducting from the total thereof, Account 530 Uncollectible operating revenues Dr. To such gross earnings of the Licensee there shall be added an amount equal to the gross earnings, similarly computed, for each other telephone company operating in the territory of the Licensee in which the Licensee owns a majority either of the voting stock or of the entire capital stock; provided, however, that on application by the Licensee for the exclusion of all or any portion of such gross revenues of any such operating company the question shall be carefully considered and determined.

The amount of each installment of said sum equal to two and one-half per cent (2½%) of the Licensee's total gross earnings due for each month shall be determined by such total gross earnings of the second preceding month, computed in the manner aforesaid, and a statement, over the signature of the proper accounting officer of the Licensee, of its total gross earnings for each calendar month, computed in the manner aforesaid, shall be sent to the Comptroller of the Licensor, or to such other officer of the Licensor as it may theretofore designate, on or before the twenty-fifth day of the next succeeding month and payment in New York funds shall be made on or before the tenth day of the month next following that being the month for which such payment is due.

Exhibit 1B

The Licensee will make such reports, giving such information regarding the operations of its exchanges and lines as the Licensor may from time to time reasonably request.

9. If the Licensee shall fail to pay any sums due hereunder for thirty days after the same shall become payable or shall violate any other term or condition of this agreement and shall fail to remedy or repair the same for sixty days after written notice thereof from the Licensor, the Licensor may, if it shall so elect, by written notice to Licensee, terminate the rights of the Licensee hereunder and may resort to any of its rights and remedies in law or in equity under the patent laws or otherwise, including the remedy by injunction against the Licensee or those claiming under it.

10. The contractual relations hereunder are personal to the Licensee, and any assignment or attempt to assign its rights hereunder, by act of the party or operation of law, without the written consent of the Licensor, will be good ground for a cancellation hereof by the Licensor. If the Licensor shall transfer to any party who shall agree to perform the stipulations hereof, its title to the patent rights under which telephones and apparatus are licensed herein, and its then existing rights hereunder, the provisions hereof shall inure to the benefit of and be binding upon such party in respect of all things done or to be done after such assignment, as if it were named a party hereto, and the Licensor shall no longer be responsible hereunder.

11. The rights of the Licensee hereunder shall be perpetual unless determined as herein provided.

12. The territory of the Licensee hereunder is as follows, viz:

The States of Oregon, Washington, and that part of the State of Idaho lying north of Idaho County in said State, together with that portion of said Idaho County lying north of the Salmon River.

The Licensee, in conjunction with The Pacific Telephone and Telegraph Company and Bell Telephone Company of Nevada, shall also have the right to use telephones to transact business between any point in its territory and any point in the States of California and Nevada.

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Exhibit 1B

IN WITNESS WHEREOF, the parties hereto have caused this Agreement, in duplicate, to be signed and their corporate seals to be affixed hereto by their duly authorized officers on the date first above written.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

J.A.F.

By F. R. KAPPEL
President

(CORPORATE SEAL)

Attest:

A. G. BARRY
Secretary

PACIFIC NORTHWEST BELL TELEPHONE COMPANY

By W. W. STRALEY
President

(CORPORATE SEAL)

Attest:

F. H. CASE
Secretary

Exhibit 1B

7

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
195 BROADWAY, NEW YORK 7, N. Y.

Area Code 212
EX 3-1000

F. R. Kappel
President

July 1, 1961

Mr. W. W. Straley, President
Pacific Northwest Bell Telephone Company
1200 Third Avenue
Seattle 1, Washington

Dear Mr. Straley:

This is to advise you that, effective as of this date and continuing until further notice, the American Telephone and Telegraph Company will accept as payment for its services under the License Contract 1% of the total gross earnings provided in the contract, computed however by adding Accounts 500 through 516 and deducting from the total thereof Account 530.

Sincerely yours,

F. R. Kappel

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Exhibit 1B

September 30, 1948

Dear Mr.

This is to advise you that, effective as of October 1, 1948 and continuing until further notice, the American Telephone and Telegraph Company will accept as payment for its services under the License Contract 1% of the total gross earnings provided in the contract, computed however by adding Accounts 500 through 516 and deducting from the total thereof Account 530.

Sincerely yours,

(Sgd.) LEROY A. WILSON

To all Presidents.

COPY

E28
Exhibit 1B

January 2, 1951

Mr. J. E. Harrell, President
New England Telephone and Telegraph Company
Boston 7, Massachusetts

Dear Mr. Harrell:

One of the provisions of the license service contract between your Company and ours is that no telephone apparatus which you are licensed to use shall be disposed of without our consent, except to other licensee companies.

We have recently made a review of all the cases for a number of years in which the Associated Companies have requested permission to sell apparatus licensed by us, and find no instance where consent to make the sale has been withheld.

Since no practical purpose would be served by continuing the submission of such cases, you need not hereafter submit to us any disposition which you wish to make of apparatus licensed under the license service contract.

Sincerely yours,

/s/ G. L. Best

Vice President

(similar letter to the President
of each Associated Company except
Bell of Canada)

E29
EXHIBIT 1C
License Agreement between AT&T
and Pacific Telephone

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

1C

FPI-MI—9-24-75-50M-4417

Agreement

BETWEEN

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY

Covering Services, Licenses and Privileges.

July 1, 1961.

Exhibit 1C

This Agreement, dated this 1st day of July, 1961, between the **American Telephone and Telegraph Company**, a corporation organized under the laws of the State of New York (hereinafter called the "Licensor"), and **The Pacific Telephone and Telegraph Company**, a corporation organized under the laws of the State of California (hereinafter called the "Licensee"),

WITNESSETH:

Whereas, the Licensee has been conducting a telephone business in the States of California, Nevada (through its subsidiary, Bell Telephone Company of Nevada), Oregon, Washington and a part of the State of Idaho as an Associated Company of the Bell System under a License Contract dated May 7, 1880, between the National Bell Telephone Company and the Pacific Bell Telephone Company (to which the Licensor and the Licensee have succeeded as parties), as modified from time to time by written or oral agreement and by the practice of the parties, all as set forth in a Memorandum dated March 10, 1936, signed on behalf of the Licensor and the Licensee; and

Whereas, Pacific Northwest Bell Telephone Company has been formed for the purpose of conducting the telephone business of the Licensee in the States of Oregon, Washington and a part of the State of Idaho and has entered or is entering into a license contract with the Licensor relating to that territory; and

Whereas, the change in the area in which the Licensee is doing business makes it desirable to state and reaffirm in this instrument the license and service contract relations which continue in force between the parties hereto.

Now, therefore, in consideration of the premises and of the covenants and agreements herein set forth, the parties hereto agree as follows:

1. For the purposes of this agreement, the telephone business of the Licensee is the furnishing to the public for compensation of telephone service within the territory of the Licensee as hereinafter defined.

2. The Licensee is licensed to use within its territory all telephones and all telephonic devices, apparatus, methods and systems needed for its business as defined herein which are covered by patents now or hereafter owned or controlled by the Licensor or which it may have the right to authorize the Associated Companies of the Bell System to use.

The Licensee shall be protected and saved harmless by the Licensor from all actions or suits charging infringement of patents arising from the use of any telephones or telephonic devices, apparatus, methods or systems which the Licensor may recommend.

All rights not specifically granted to the Licensee remain to the Licensor.

3. The Licensor will prosecute continuously fundamental work of research, investigation and experimentation in the development of the art and science of telephony and in the development of plans, methods, systems and ideas designed to improve telephone service and to promote safety, economy and efficiency in the equipment, construction and operation of the telephone plants of the Associated Companies of the Bell System, and will direct development work by others for the production of materials and apparatus necessary for rendering the products of such work of the Licensor available for use by such Associated Companies.

The Licensee shall have the right to use and the Licensor will render available for use by the Associated Companies of the Bell System as and when completed and standardized all products of the Licensor's fundamental work of research, investigation and experimentation, and all inventions, discoveries and patents, and all methods and systems covered by patents needed for the said business of the Licensee, and all apparatus and appliances, methods and systems embodying such inventions, discoveries and patents, and to this end, if any patent rights held by others in any such invention or discovery are necessary to make such invention or discovery available for such use, the Licensor will, in case such invention or discovery relates to telephones, acquire the requisite patent rights therein, and in case such invention or discovery relates to other than telephones, provide suitable arrangements for making the apparatus, appliances, methods and systems embodying such invention or discovery available for use as aforesaid; provided that each such acquisition or arrangement can, in the judgment of the Licensor, be consummated on reasonable terms.

4. The Licensor will make and maintain continuously in effect adequate arrangements whereby telephones and other telephonic devices and apparatus needed for the business of the Licensee may be manufactured under all patents now or hereafter owned or controlled by the Licensor, or under which it may have the right to grant licenses to others, and whereby the Licensee may purchase such telephones, telephonic devices and apparatus for use in its territory and subject to the provisions hereof, at prices which shall be reasonable and not higher than the lowest prices charged by the manufacturer from time to time to others under similar circumstances.

5. The Licensor will furnish to the Licensee

(a) Advice and assistance in general engineering, plant, traffic, operating, commercial, accounting (including the auditing of accounts), patent, legal, administrative and other matters pertaining to the efficient, economical and successful conduct of said business of the Licensee; such advice and assistance to be given by the

Licensor through conferences with its specialists and the issuance to the Licensee of data and conclusions, including bulletins, books, circular letters, and standard specifications and drawings, and through the performance of specific work in cases of unusual magnitude and complexity where such work is necessary or desirable.

(b) Advice and assistance in any financing required to be done by the Licensee in the extension, development or improvement of its telephone system within its said territory and in the general matter of its finances; aid in securing funds on fair terms, as and when needed for new construction and other expenditures, but not, at any time, to a greater extent than the then condition of the finances and credit of the Licensor may permit; active assistance in the marketing of the Licensee's securities; and such other necessary financial support and assistance in the premises as will tend to serve the best interests of both Companies.

(c) Active assistance, cooperation and support in connection with the adoption from time to time by the Licensee of such measures as will, in the judgment of the parties hereto, best protect and preserve the health and promote the well-being in employment of the employees of the Licensee and, in other ways, conserve the high quality of its service to the public through the maintenance of a stable, contented and efficient personnel.

6. The Licensor will maintain continuously an organization of specialists trained in the various branches of the work required to be done by the Licensor in rendering the foregoing services, of such numbers and possessed of such technical knowledge and experience as will enable said work to be so done as to relieve the Licensee from the necessity of attempting to perform said work for itself.

7. The Licensee shall have the right

(a) To extend to the subscribers and other patrons of the Licensee and of its connecting companies within its said territory the privilege of using, upon payment of the regular tolls therefor, connections maintained or caused to be maintained by the Licensor between the telephone system of the Licensee and the telephone systems of the other Associated Companies of the Bell System for telephonic communication between such subscribers and other patrons and the subscribers and other patrons of such Associated Companies and of their connecting companies in their respective territories.

(b) For the betterment of the service throughout its said territory, to extend to its connecting companies within its said territory, on such terms and conditions as it may determine, the benefit of such engineering and other technical advice and information with respect to construction, maintenance, repair and operation of plant as the Licensee may receive from the Licensor.

The Licensee shall not directly or indirectly connect with the lines of the Licensor or its appointees any telephone facilities which in the judgment of the Licensor would unduly impair the quality of the service.

8. In consideration of the premises and for all benefits accruing to the licensee hereunder, the Licensee shall pay to the Licensor a sum equal to two and one-half per cent (2½%) of the total gross earnings of the Licensee, which shall be payable in monthly installments, as herein provided, and in accordance with the established practice of the parties hereto, and shall be computed as follows: Such total gross earnings shall be computed by adding the following accounts described and defined in the Uniform System of Accounts for Telephone Companies prescribed by the Federal Communications Commission: Account 500 Subscribers' station revenues, Account 501 Public telephone revenues, Account 504 Local private line services, and Account 510 Message tolls, and by deducting from the total thereof, Account 530 Uncollectible operating revenues Dr. To such gross earnings of the Licensee

Exhibit 1C

there shall be added an amount equal to the gross earnings, similarly computed, for each other telephone company operating in the territory of the Licensee in which the Licensee owns a majority either of the voting stock or of the entire capital stock; provided, however, that on application by the Licensee for the exclusion of all or any portion of such gross revenues of any such operating company the question shall be carefully considered and determined.

The amount of each installment of said sum equal to two and one-half per cent (2½%) of the Licensee's total gross earnings due for each month shall be determined by such total gross earnings of the second preceding month, computed in the manner aforesaid, and a statement over the signature of the proper accounting officer of the Licensee, of its total gross earnings for each calendar month, computed in the manner aforesaid, shall be sent to the Comptroller of the Licensor, or to such other officer of the Licensor as it may theretofore designate, on or before the twenty-fifth day of the next succeeding month and payment in New York funds shall be made on or before the tenth day of the month next following, that being the month for which such payment is due.

The Licensee will make such reports, giving such information regarding the operations of its exchanges and lines as the Licensor may from time to time reasonably request.

9. If the Licensee shall fail to pay any sums due hereunder for thirty days after the same shall become payable or shall violate any other term or condition of this agreement and shall fail to remedy or repair the same for sixty days after written notice thereof from the Licensor, the Licensor may, if it shall so elect, by written notice to Licensee, terminate the rights of the Licensee hereunder and may resort to any of its rights

and remedies in law or in equity under the patent laws or otherwise, including the remedy by injunction against the Licensee or those claiming under it.

10. The contractual relations hereunder are personal to the Licensee, and any assignment or attempt to assign its rights hereunder, by act of the party or operation of law, without the written consent of the Licensor, will be good ground for a cancellation hereof by the Licensor. If the Licensor shall transfer to any party who shall agree to perform the stipulations hereof, its title to the patent rights under which telephones and apparatus are licensed herein, and its then existing rights hereunder, the provisions hereof shall inure to the benefit of and be binding upon such party in respect of all things done or to be done after such assignment, as if it were named a party hereto, and the Licensor shall no longer be responsible hereunder.

11. The rights of the Licensee hereunder shall be perpetual unless determined as herein provided.

12. The territory of the Licensee hereunder is as follows, viz.:

The States of California and Nevada.

The Licensee, in conjunction with Pacific Northwest Bell Telephone Company, shall also have the right to use telephones to transact business between any point in its territory and any point in the States of Oregon, Washington and that part of the State of Idaho lying north of Idaho County in said State, together with that portion of said Idaho County lying north of the Salmon River.

In Witness Whereof, the parties hereto have caused this Agreement, in duplicate, to be signed and their corporate seals to be affixed hereto by their duly authorized officers as of the date first above written.

AMERICAN TELEPHONE AND TELEGRAPH
COMPANY

(CORPORATE SEAL)

By F. R. KAPPEL
President

Attest:

ELIZABETH K. TAYLOR
Assistant Secretary

THE PACIFIC TELEPHONE AND
TELEGRAPH COMPANY

By C. O. LINDEMAN
President

Attest:

DEAN ANDERSON
Secretary

(CORPORATE SEAL)

Exhibit 1C

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
195 BROADWAY, NEW YORK 7, N. Y.
Area Code 212
EX 3-1000

F. R. KAPPEL
President

July 1, 1961

Mr. C. O. Lindeman, President
The Pacific Telephone and
Telegraph Company
140 New Montgomery Street
San Francisco 5, California

Dear Mr. Lindeman:

This is to advise you that, effective as of this date and continuing until further notice, the American Telephone and Telegraph Company will accept as payment for its services under the License Contract 1% of the total gross earnings provided in the contract, computed however by adding Accounts 500 through 516 and deducting from the total thereof Account 530.

Sincerely yours,

F. R. Kappel.

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Exhibit 1C

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY NEW YORK 7 N Y

AREA CODE 212
EX 3 1000

F R KAPPEL
[illegible]

July 1, 1961

Mr. C. O. Lindeman, President
The Pacific Telephone and Telegraph Company
140 New Montgomery Street
San Francisco 5, California

Dear Mr. Lindeman:

Paragraph 8 of the License Contract between our two companies, executed as of even date herewith, provides that the total gross earnings upon which the Licensee's payments thereunder are based shall be determined each month by the gross earnings of the second preceding month. This is to advise you that the payments due from your company for the months of July and August, 1961, may be based upon the gross earnings of your company excluding the gross earnings of Pacific Telephone - Northwest (a Division of The Pacific Telephone and Telegraph Company) for the months of May and June, 1961, respectively.

Very truly yours,

F R Kappel

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EXHIBIT 1D
License Agreement between AT&T
and South Central Bell

- 475
3-71

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

1D

FPI-MI—9-24-75-50M-4417

Agreement

BETWEEN

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND

SOUTH CENTRAL BELL TELEPHONE COMPANY

Covering Services, Licenses and Privileges

Dated July 1, 1968

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Exhibit 1D

THIS AGREEMENT, dated the 1st day of July, 1968, between the AMERICAN TELEPHONE AND TELEGRAPH COMPANY, a corporation organized under the laws of the State of New York (hereinafter called the "Licensor"), and the SOUTH CENTRAL BELL TELEPHONE COMPANY, a corporation organized under the laws of the State of Delaware (hereinafter called the "Licensee"),

WITNESSETH:

WHEREAS, the Licensee has been formed for the purpose of conducting a telephone business, within the territory hereinafter defined, as an Associated Company of the Bell System, with license and service contract relations with the Licensor,

NOW, THEREFORE, in consideration of the premises and of the covenants and agreements herein set forth the parties hereto agree as follows:

1. For the purposes of this agreement, the telephone business of the Licensee is the furnishing to the public for compensation of telephone service within the territory of the Licensee as hereinafter defined.

2. The Licensee is licensed to use within its territory all telephones and all telephonic devices, apparatus, methods and systems needed for its business as defined herein which are covered by patents now or hereafter owned or controlled by the Licensor or which it may have the right to authorize the Associated Companies of the Bell System to use.

The Licensee shall be protected and saved harmless by the Licensor from all actions or suits charging infringement of patents arising from the use of any telephones or telephonic devices, apparatus, methods or systems which the Licensor may recommend.

All rights not specifically granted to the Licensee remain to the Licensor.

3. The Licensor will prosecute continuously fundamental work of research, investigation and experimentation in the development of the art and science of telephony and in the development of plans, methods, systems and ideas designed to improve telephone service and to promote safety, economy and efficiency in the equipment, construction and operation of the telephone plants of the Associated Companies of the Bell System, and will direct development work by others for the production of materials and apparatus necessary for rendering the products of such work of the Licensor available for use by such Associated Companies.

The Licensee shall have the right to use and the Licensor will render available for use by the Associated Companies of the Bell System as and when completed and standardized all products of the Licensor's fundamental work of research, investigation and experimentation, and all inventions, discoveries and patents, and all methods and systems covered by patents needed for the said business of the Licensee, and all apparatus and appliances, methods and systems embodying such inventions, discoveries and patents, and to this end, if any patent rights held by others in any such invention or discovery are necessary to make such invention or discovery available for such use, the Licensor will, in case such invention or discovery relates to telephones, acquire the requisite patent rights therein, and, in case such invention or discovery relates to other than telephones, provide suitable arrangements for making the apparatus, appliances, methods and systems embodying such invention or discovery available for use as aforesaid; provided that each such acquisition or arrangement can, in the judgment of the Licensor, be consummated on reasonable terms.

4. The Licensor will make and maintain continuously in effect adequate arrangements whereby telephones and other telephonic devices and apparatus needed for the business of the Licensee may be manufactured under all patents now or hereafter owned or controlled by the Licensor, or under which

Exhibit 1D

it may have the right to grant licenses to others, and whereby the Licensee may purchase such telephones, telephonic devices and apparatus for use in its territory and subject to the provisions hereof, at prices which shall be reasonable and not higher than the lowest prices charged by the manufacturer from time to time to others under similar circumstances.

5. The Licensor will furnish to the Licensee

(a) Advice and assistance in general engineering, plant, traffic, operating, commercial, accounting (including the auditing of accounts), patent, legal, administrative and other matters pertaining to the efficient, economical and successful conduct of said business of the Licensee; such advice and assistance to be given by the Licensor through conferences with its specialists and the issuance to the Licensee of data and conclusions, including bulletins, books, circular letters, and standard specifications and drawings, and through the performance of specific work in cases of unusual magnitude and complexity where such work is necessary or desirable.

(b) Advice and assistance in any financing required to be done by the Licensee in the extension, development or improvement of its telephone system within its said territory and in the general matter of its finances; aid in securing funds on fair terms, as and when needed for new construction and other expenditures, but not, at any time, to a greater extent than the then condition of the finances and credit of the Licensor may permit; active assistance in the marketing of the Licensee's securities; and such other necessary financial support and assistance in the premises as will tend to serve the best interests of both Companies.

(c) Active assistance, cooperation and support in connection with the adoption from time to time by the Licensee of such measures as will, in the judgment of the parties hereto, best protect and preserve the health and promote the well-being in employment of the employees of the Licensee and, in other ways, conserve the high quality of its service to the public through the maintenance of a stable, contented and efficient personnel.

6. The Licensor will maintain continuously an organization of specialists trained in the various branches of the work required to be done by the Licensor in rendering the foregoing services, of such numbers and possessed of such technical knowledge and experience as will enable said work to be so done as to relieve the Licensee from the necessity of attempting to perform said work for itself.

7. The Licensee shall have the right

(a) To extend to the subscribers and other patrons of the Licensee and of its connecting companies within its said territory the privilege of using, upon payment of the regular tolls therefor, connections maintained or caused to be maintained by the Licensor between the telephone system of the Licensee and the telephone systems of the other Associated Companies of the Bell System for telephonic communication between such subscribers and other patrons and the subscribers and other patrons of such Associated Companies and of their connecting companies in their respective territories.

(b) For the betterment of the service throughout its said territory, to extend to its connecting companies within its said territory, on such terms and conditions as it may determine, the benefit of such engineering and other technical advice and information with respect to construction, maintenance, repair and operation of plant as the Licensee may receive from the Licensor.

The Licensee shall not directly or indirectly connect with the lines of the Licensor or its appointees any telephone facilities which in the judgment of the Licensor would unduly impair the quality of the service.

8. In consideration of the premises and for all benefits accruing to the Licensee hereunder, the Licensee shall pay to

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Exhibit 1D

the Licensor a sum equal to two and one-half per cent. (2½%) of the total gross earnings of the Licensee, which shall be payable in monthly installments, as herein provided, and in accordance with the established practice of the parties hereto, and shall be computed as follows: Such total gross earnings shall be computed by adding the following accounts described and defined in the Uniform System of Accounts for Telephone Companies prescribed by the Federal Communications Commission: Account 500 Subscribers' station revenues, Account 501 Public telephone revenues, Account 504 Local private line services, and Account 510 Message tolls, and by deducting from the total thereof, Account 530 Uncollectible operating revenues Dr. To such gross earnings of the Licensee there shall be added an amount equal to the gross earnings, similarly computed, for each other telephone company operating in the territory of the Licensee in which the Licensee owns a majority either of the voting stock or of the entire capital stock; provided, however, that on application by the Licensee for the exclusion of all or any portion of such gross revenues of any such operating company the question shall be carefully considered and determined.

The amount of each installment of said sum equal to two and one-half per cent. (2½%) of the Licensee's total gross earnings due for each month shall be determined by such total gross earnings of the second preceding month, computed in the manner aforesaid, and a statement, over the signature of the proper accounting officer of the Licensee, of its total gross earnings for each calendar month, computed in the manner aforesaid, shall be sent to the Comptroller of the Licensor, or to such other officer of the Licensor as it may theretofore designate, on or before the twenty-fifth day of the next succeeding month and payment in New York funds shall be made on or before the tenth day of the month next following, that being the month for which such payment is due.

The Licensee will make such reports, giving such information regarding the operations of its exchanges and lines as the Licensor may from time to time reasonably request.

9. If the Licensee shall fail to pay any sums due hereunder for thirty days after the same shall become payable or shall violate any other term or condition of this agreement and shall fail to remedy or repair the same for sixty days after written notice thereof from the Licensor, the Licensor may, if it shall so elect, by written notice to Licensee, terminate the rights of the Licensee hereunder and may resort to any of its rights and remedies in law or in equity under the patent laws or otherwise, including the remedy by injunction against the Licensee or those claiming under it.

10. The contractual relations hereunder are personal to the Licensee, and any assignment or attempt to assign its rights hereunder by act of the party or operation of law, without the written consent of the Licensor, will be good ground for a cancellation hereof by the Licensor. If the Licensor shall transfer to any party who shall agree to perform the stipulations hereof, its title to the patent rights under which telephones and apparatus are licensed herein, and its then existing rights hereunder, the provisions hereof shall inure to the benefit of and be binding upon such party in respect of all things done or to be done after such assignment, as if it were named a party hereto, and the Licensor shall no longer be responsible hereunder.

11. The rights of the Licensee hereunder shall be perpetual, unless determined as herein provided.

12. The territory of the Licensee hereunder is as follows, viz.:

The States of Alabama, Louisiana, Mississippi, Tennessee and Kentucky, except the Counties of Boone, Campbell, Gallatin, Grant, Kenton and Pendleton.

In Witness Whereof, the parties hereto have caused this Agreement, in duplicate, to be signed and their corporate seals to be affixed hereto by their duly authorized officers as of the date first above written.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY,

By B. S. GILMER
President

(CORPORATE SEAL)

Attest:

W. H. RIGGS
Assistant Secretary

SOUTH CENTRAL BELL TELEPHONE COMPANY,

By W. C. BAUER
President

(CORPORATE SEAL)

Attest:

W. H. BAILEY
Secretary

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Exhibit 1D

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK, N.Y. 10007

AREA CODE 212 393-1000

BEN S. GILMER
PRESIDENT

July 1, 1968

Mr. W. C. Bauer, President
South Central Bell Telephone Company
Central Bank Building
701 South 20th Street
Birmingham, Alabama 35233

Dear Mr. Bauer:

This is to advise you that effective as of this date and continuing until further notice, the American Telephone and Telegraph Company will accept as payment for its services under the License Contract dated July 1, 1968, 1% of the total gross earnings provided in the contract, computed, however, by adding Accounts 500 through 516 and deducting from the total thereof Account 530.

It is understood and agreed that installments due and payable under the License Contract shall be made by you for the months of July and August, 1968, based on pro forma statements for the second preceding months (May and June, 1968, respectively) of the total gross earnings of Southern Bell Telephone and Telegraph Company (your predecessor in business) applicable to its operations in the territory described in Paragraph 12 of the License Contract.

Sincerely yours,

B S Gilmer

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EXHIBIT 1E
License Agreement between AT&T
and Southern Bell

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
1E

FPI-MI—9-24 76-50M-4417

Agreement

BETWEEN

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND

SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY

Covering Services, Licenses and Privileges

Dated July 1, 1968

Exhibit 1E

THIS AGREEMENT, dated the 1st day of July, 1968, between the AMERICAN TELEPHONE AND TELEGRAPH COMPANY, a corporation organized under the laws of the State of New York (hereinafter called the "Licensor"), and SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY, a corporation organized under the laws of the State of New York (hereinafter called the "Licensee"),

WITNESSETH:

WHEREAS, the Licensee has been conducting a telephone business in the States of Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee; and the State of Kentucky, except the Counties of Boone, Campbell, Gallatin, Grant, Kenton and Pendleton, as an Associated Company of the Bell System under an Agreement between the parties hereto dated June 24, 1930, covering Services, Licenses and Privileges; and

WHEREAS, the South Central Bell Telephone Company has been formed for the purpose of conducting the telephone business of the Licensee in the States of Alabama, Louisiana, Mississippi, Tennessee and Kentucky, except the Counties of Boone, Campbell, Gallatin, Grant, Kenton and Pendleton, and has entered or is entering into a license contract with the Licensor relating to that territory; and

WHEREAS, the change in the area in which the Licensee is doing business makes it desirable to state and reaffirm in this instrument the license and service contract relations which continue in force between the parties hereto.

NOW, THEREFORE, in consideration of the premises and of the covenants and agreements herein set forth, the parties hereto agree as follows:

1. For the purposes of this agreement, the telephone business of the Licensee is the furnishing to the public for

compensation of telephone service within the territory of the Licensee as hereinafter defined.

2. The Licensee is licensed to use within its territory all telephones and all telephonic devices, apparatus, methods and systems needed for its business as defined herein which are covered by patents now or hereafter owned or controlled by the Licensor or which it may have the right to authorize the Associated Companies of the Bell System to use.

The Licensee shall be protected and saved harmless by the Licensor from all actions or suits charging infringement of patents arising from the use of any telephones or telephonic devices, apparatus, methods or systems which the Licensor may recommend.

All rights not specifically granted to the Licensee remain to the Licensor.

3. The Licensor will prosecute continuously fundamental work of research, investigation and experimentation in the development of the art and science of telephony and in the development of plans, methods, systems and ideas designed to improve telephone service and to promote safety, economy and efficiency in the equipment, construction and operation of the telephone plants of the Associated Companies of the Bell System, and will direct development work by others for the production of materials and apparatus necessary for rendering the products of such work of the Licensor available for use by such Associated Companies.

The Licensee shall have the right to use and the Licensor will render available for use by the Associated Companies of the Bell System as and when completed and standardized all products of the Licensor's fundamental work of research, investigation and experimentation, and all inventions, discoveries and patents, and all methods and systems covered by patents needed for the said business of the Licensee, and all apparatus and appliances, methods and systems embodying such inventions, discoveries and patents, and to this end, if any patent rights held by others in any such invention or discovery are necessary to make such invention or discovery available for such use, the Licensor will, in case such invention or discovery relates to telephones, acquire the requisite patent rights therein, and, in case such invention or discovery relates to other than telephones, provide suitable arrangements for making the apparatus, appliances, methods and systems embodying such invention or discovery available for use as aforesaid; provided that each such acquisition or arrangement can, in the judgment of the Licensor, be consummated on reasonable terms.

4. The Licensor will make and maintain continuously in effect adequate arrangements whereby telephones and other telephonic devices and apparatus needed for the business of the Licensee may be manufactured under all patents now or hereafter owned or controlled by the Licensor, or under which it may have the right to grant licenses to others, and whereby the Licensee may purchase such telephones, telephonic devices and apparatus for use in its territory and subject to the provisions hereof, at prices which shall be reasonable and not higher than the lowest prices charged by the manufacturer from time to time to others under similar circumstances.

5. The Licensor will furnish to the Licensee

(a) Advice and assistance in general engineering, plant, traffic, operating, commercial, accounting (including the auditing of accounts), patent, legal, administrative and other matters pertaining to the efficient, economical and successful conduct of said business of the Licensee; such advice and assistance to be given by the Licensor through conferences with its specialists and the issuance to the Licensee of data and conclusions, including bulletins, books, circular letters, and standard specifications and drawings, and through the performance of specific work in cases of unusual magnitude and complexity where such work is necessary or desirable.

(b) Advice and assistance in any financing required to be done by the Licensee in the extension, development or improvement of its telephone system within its said territory and in the general matter of its finances; aid in securing funds on fair terms, as and when needed for new construction and other expenditures, but not, at any time, to a greater extent than the then condition of the finances and credit of the Licensor may permit; active assistance in the marketing of the Licensee's securities; and such other necessary financial support and assistance in the premises as will tend to serve the best interests of both Companies.

(c) Active assistance, cooperation and support in connection with the adoption from time to time by the Licensee of such measures as will, in the judgment of the parties hereto, best protect and preserve the health and promote the well-being in employment of the employees of the Licensee and, in other ways, conserve the high quality of its service to the public through the maintenance of a stable, contented and efficient personnel.

6. The Licensor will maintain continuously an organization of specialists trained in the various branches of the work required to be done by the Licensor in rendering the foregoing services, of such numbers and possessed of such technical knowledge and experience as will enable said work to be so done as to relieve the Licensee from the necessity of attempting to perform said work for itself.

7. The Licensee shall have the right

(a) To extend to the subscribers and other patrons of the Licensee and of its connecting companies within its said territory the privilege of using, upon payment of the regular tolls therefor, connections maintained or caused to be maintained by the Licensor between the telephone system of the Licensee and the telephone systems of the other Associated Companies of the Bell System for telephonic communication between such subscribers and other patrons and the subscribers and other patrons of such Associated Companies and of their connecting companies in their respective territories.

(b) For the betterment of the service throughout its said territory, to extend to its connecting companies within its said territory, on such terms and conditions as it may determine, the benefit of such engineering and other technical advice and information with respect to construction, maintenance, repair and operation of plant as the Licensee may receive from the Licensor.

The Licensee shall not directly or indirectly connect with the lines of the Licensor or its appointees any telephone facilities which in the judgment of the Licensor would unduly impair the quality of the service.

8. In consideration of the premises and for all benefits accruing to the Licensee hereunder, the Licensee shall pay to the Licensor a sum equal to two and one-half per cent. (2½%) of the total gross earnings of the Licensee, which shall be payable in monthly installments, as herein provided, and in accordance with the established practice of the parties hereto, and shall be computed as follows: Such total gross earnings shall be computed by adding the following accounts described and defined in the Uniform System of Accounts for Telephone Companies prescribed by the Federal Communications Commission: Account 500 Subscribers' station revenues, Account 501 Public telephone revenues, Account 504 Local private line services, and Account 510 Message tolls, and by deducting from the total thereof, Account 530 Uncollectible operating revenues Dr. To such gross earnings of the Licensee there shall be added an amount equal to the gross earnings, similarly computed, for each other telephone company operating in the territory of the Licensee in which the Licensee owns a majority either of the voting stock or of the entire capital stock; provided, however, that on application by the Licensee for the exclusion of all or any portion of such gross revenues of any such operating company the question shall be carefully considered and determined.

The amount of each installment of said sum equal to two and one-half per cent. (2½%) of the Licensee's total gross earnings due for each month shall be determined by such total gross earnings of the second preceding month, computed in the manner aforesaid, and a statement, over the signature of the proper accounting officer of the Licensee, of its total gross earnings for each calendar month, computed in the manner aforesaid, shall be sent to the Comptroller of the Licensor, or to such other officer of the Licensor as it may theretofore designate, on or before the twenty-fifth day of the next succeeding month and payment in New York funds shall be made on or before the tenth day of the month next following, that being the month for which such payment is due.

The Licensee will make such reports, giving such information regarding the operations of its exchanges and lines as the Licensor may from time to time reasonably request.

9. If the Licensee shall fail to pay any sums due hereunder for thirty days after the same shall become payable or shall violate any other term or condition of this agreement and shall fail to remedy or repair the same for sixty days after written notice thereof from the Licensor, the Licensor may, if it shall so elect, by written notice to Licensee, terminate the rights of the Licensee hereunder and may resort to any of its rights and remedies in law or in equity under the patent laws or otherwise, including the remedy by injunction against the Licensee or those claiming under it.

10. The contractual relations hereunder are personal to the Licensee, and any assignment or attempt to assign its rights hereunder by act of the party or operation of law, without the written consent of the Licensor, will be good ground for a cancellation hereof by the Licensor. If the Licensor shall transfer to any party who shall agree to perform the stipulations hereof, its title to the patent rights under which telephones and apparatus are licensed herein, and its then existing rights hereunder, the provisions hereof shall inure to the benefit of and be binding upon such party in respect of all things done or to be done after such assignment, as if it were named a party hereto, and the Licensor shall no longer be responsible hereunder.

11. The rights of the Licensee hereunder shall be perpetual, unless determined as herein provided.

12. The territory of the Licensee hereunder is as follows, viz.:

The States of Florida, Georgia, North Carolina and South Carolina.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement, in duplicate, to be signed and their corporate seals to be affixed hereto by their duly authorized officers as of the date first above written.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY,

By B. S. GILMER
President

(CORPORATE SEAL)

Attest:

W. H. RIGGS
Assistant Secretary

SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY,

By F. M. MALONE
President

(CORPORATE SEAL)

Attest:

CLINCH G. NORSWORTHY, III
Assistant Secretary

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Exhibit 1E

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK, N.Y. 10007

AREA CODE 212 393-1000

BEN S. GILMER
PRESIDENT

July 1, 1968

Mr. F. M. Malone, President
Southern Bell Telephone and
  Telegraph Company
Hurt Building, Suite 1740
Atlanta, Georgia 30303

Dear Mr. Malone:

This is to advise you that, effective as of this date and continuing until further notice, the American Telephone and Telegraph Company will accept as payment for its services under the License Contract, dated July 1, 1968, 1% of the total gross earnings provided in the contract, computed, however, by adding Accounts 500 through 516 and deducting from the total thereof Account 530.

It is understood and agreed that installments due and payable under the License Contract shall be made by you for the months of July and August, 1968, based on pro forma statements for the second preceding months (May and June, 1968, respectively) of your total gross earnings applicable to your operations in the territory described in Paragraph 12 of the License Contract.

Sincerely yours,

BSGilmer

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
USA 33a-476
(ED. 4-23-71)

7M

American Telephone and Telegraph Company

1972 Annual Repor

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EXHIBIT 7M
1972 AT&T Annual Report

here is in my mind no conflict among our
nsibilities to the public, to our share ow
to our employees. Fundamentally, how
business exists for no other reason than
service it provides the public. That is why
ay that our responsibility to investors place
greater obligation upon us than doing the
y best service job we know how to
earn our earnings and this ye

[illegible]

E59
Exhibit 7M

The Annual Meeting of share owners will be held at 2 p.m. on Wednesday, April 18, 1973 in the Arie Crown Theatre, McCormick Place, Chicago, Illinois. Any persons who plan to attend the meeting should write to the Secretary of the Company for an admission card.

The financial results reported herein are for the American Telephone and Telegraph Company and its principal telephone subsidiaries consolidated.

If you need further information:

- *Financial statements of AT&T alone and annual reports of the Bell Telephone operating companies and of Western Electric, manufacturing and supply unit of the Bell System, are available on request.*

- *Also available is an Annual Statistical Report, intended for those desiring further data on our operations.*

- *Share owners who are blind may obtain the AT&T report in braille or on talking records.*

Kindly address requests to the Secretary, American Telephone and Telegraph Company, 195 Broadway, New York, N.Y. 10007

The Company maintains stock transfer offices at 180 Fulton St., New York, N.Y. 10007 and also at: 185 Franklin St., Boston, Mass. 02107; 225 West Randolph St., Chicago, Ill. 60606; and 140 New Montgomery St., San Francisco, Calif. 94105

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Exhibit 7M

American Telephone and Telegraph Company

1972 Annual Report

Results in Brief	1972	1971*
Earnings Per Common Share	$ 4.34	$ 3.92
	Millions	
Income		
Local Services	$10,363	$ 9,135
Toll Services	9,771	8,633
Other	1,218	1,111
	$21,352	$18,879
Expenses		
Operating	$13,518	$12,075
Taxes	3,807	3,314
Interest	1,495	1,288
	$18,820	$16,677
Net Income	$ 2,532	$ 2,202
Dividends Declared	$ 1,633	$ 1,486
Earnings Reinvested in the Business	$ 899	$ 716

Restated (see Note (b) page 35.)

E61
Exhibit 7M

On April 1, 1972, a new management team was elected to head the Bell System. John D. deButts (center) became Chairman of the Board. Robert D. Lilley (left) was named President, and William L. Lindholm, Vice Chairman of the Board.

Exhibit 7M

Report of the Chairman of the Board

Dear Share Owner:

In 1972 the Bell companies did what they set out to do: improve service, improve efficiency, improve earnings.

Revenues rose 13 per cent and net income applicable to AT&T common shares over 10 per cent. Earnings per share were $4.34 vs $3.92 a year ago.

This earnings improvement didn't just happen. It was *made* to happen.

A rising economy helped, as did our growing mastery over service difficulties that have plagued recent years.

So, too, did the growing recognition on the part of regulatory authorities of our need to reprice our services at levels that reflect their cost and value today.

But the key factor in the year's outcome was the energy and intelligence with which Bell managers applied themselves to improving efficiency and controlling costs in every aspect of our operations.

In short, the Bell companies recognized that only by a significant improvement in earnings per share could the Bell System assure its ability—after three years of flat earnings—to finance on sound terms the very large construction programs it must undertake in the years ahead to meet the public's communications needs. Accordingly, from the year's outset the Bell companies made it their aim to demonstrate—promptly and convincingly—their ability to accomplish an earnings improvement that would warrant the continuing confidence of current investors in our business and the interest of new ones. The year's results fulfill that objective.

These results were not accomplished —and could not be—by headquarters edict. Rather were they the product of the efforts of thousands of Bell System managers who, seeing what needed to be done, committed themselves to goals that—like the Bell System's goals —were just a little more demanding than seemed reasonable at the outset. They wrote the record of the year's accomplishments that is set forth in these pages. And it is to them that this Annual Report is dedicated.

Perhaps the clearest measure of the year's advances in productivity is the fact that—with virtually no increase in employees—the Bell companies at year's end were handling a volume of business over 10 per cent higher than they were handling at the beginning.

It is now three years since an AT&T Annual Report first took note of the serious service difficulties that had developed in some places and the severe public criticism that ensued. At that time we said that no effort would be spared to set matters right.

And no efforts have been spared. While much remains to be done, what should be clear is that the general level of telephone service the Bell companies provide has been steadily improving. It is particularly gratifying to note that New York City, site of our most widely publicized difficulties, is generally in good shape. Wherever other service problems remain, we stand firm in our determination to correct them, too, as promptly as possible. In some areas where demand continues to accelerate at an extraordinarily rapid pace, this will doubtless prove to be an arduous, complex task. But, as I said at our Annual Meeting in the spring, our responsibility to investors places no greater obligation upon us than doing the very best service job we know how to do—and this your management pledges itself to do.

Recent years have seen a considerable increase in the scope and intensity of regulatory activity affecting our business. Partly this derives from the emergence of competition in the communications industry and the policy questions it raises. And partly it derives from our own need to seek authority for rate increases that will permit us to earn at levels sufficient to warrant the confidence of today's investors.

With respect to the degree to which competition should obtain in an indus-

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try that owes its present advanced state of development and the low cost of its services to the shared use of common facilities, I expressed myself at some length at our Annual Meeting last April. Suffice it to say here what I said then. We do not intend to abdicate any sector of our business where we are convinced—and can by our performance prove—we can do a better job for the public than anybody else. In short, in whatever aspects of our business competition may be found to be in the public interest, we intend to be good competitors. But we shall vigorously oppose any proposition that, whatever advantage it may offer to a few, would impair or restrict our ability to serve the public at large or add to the costs of doing so. Share owners may be assured that in the gathering debate over the role of competition in communications our views will be vigorously represented.

But share owners—because they are customers as well as investors—are likely to be more immediately concerned with the rising cost of service.

In 1972 nearly all the Bell companies sought rate increases from the regulatory commissions in their territories, some of them for the second or third time in recent years. They did so in the face of a general stiffening of the public's resistance to price increases on every front and in full recognition of the risks of appearing to run at cross-purposes to the government's anti-inflation policy. But they did so because their responsibilities to their customers as well as their share owners afforded them no other choice.

That choice was dictated by an obligation that we, like other utilities, have no alternative but to meet. In good times and bad and regardless of whether costs are going up or down, it is our responsibility to meet public demand when and where it arises. What now requires us to seek higher rates at a time when price rises in the general economy are slowing is the continuing expansion of capacity required of us and the very large amounts of new capital it takes to finance that construction—$3.7 billion in 1972 alone.

No business is more committed to the fight against inflation than ours. It could hardly be otherwise in view of the arduous and protracted process it requires to gain regulatory approval of rate changes that reflect the costs we experience. That is why—down through the years—we have exerted every means to conserve capital and cut costs that sound management and advancing technology afford. When those efforts prove insufficient, however, we have no other recourse than to seek authority to reprice our services. To do otherwise would be to risk falling short of the service expectations of our customers and the earnings expectations of our investors.

Above I described the results of our 1972 applications for increased rates as generally heartening. That does not mean that we have not encountered disappointments in some jurisdictions. Even though our per share earnings are much improved, there still are places not paying their proper share of service costs. Where this is so we must continue to ask for rate increases. Indeed, in some places where regulators have been indisposed to recognize what appear to us to be today's financial realities, Bell company managers must of necessity consider carefully whether construction activity can be continued at current levels in the absence of the prospect of earnings sufficient to provide an adequate return on the new investment required.

It would be regrettable, it seems to me, if as a result of the often-heated contention that surrounds some regulatory proceedings the impression were to be conveyed that there is somehow an inevitable and irreconcilable conflict between the interests of our customers and the interests of our share owners. There is not. Good earnings and good service are inseparable objectives. To fall short of one is to risk losing both.

Most regulators, I am glad to say, understand this relationship. It is crucially important that the public understand it as well.

Nobody likes price increases. Reminded, however, of the fact that throughout the decade of the 60's tele-

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phone rates stood firm while the prices of nearly everything else were going up, the public will, I believe, be ready to recognize the reasonableness of our needs. And I believe, too, that, presented with the facts, the public will be ready to recognize that to serve we must build and to build we must earn—and earn at levels that are competitive with investment opportunities in other businesses, regulated and unregulated. The alternative to our doing so is to acquiesce in that irreversible process that begins with inadequate capitalization and ends in deteriorating performance and the demoralizing appeals for public subsidy that have been the all-too-familiar history of some once-great businesses. Down that road the Bell companies are not ready to take even the first step.

To see that we do not, we shall continue to press vigorously in each regulatory jurisdiction for the opportunity to achieve the earnings growth we believe is necessary to assure the long-run vitality of this business and the service it provides the public. At the same time we shall neglect no opportunity to demonstrate through performance—by continuously enhancing the usefulness of our service and the efficiency with which we provide it—that we do in fact earn our earnings.

In conclusion, two personal observations:

First of all, it is my hope that share owners, as they turn the pages of this report, will recognize that what is recorded here represents but an all-too-cursory summing up of the year-long efforts of more than a million people. Some of them work at switchboards, some in offices, some in factories. Some are stenographers and some technicians. Some compose computer programs and some spend their days exploring the remotest regions of science. What gives their diverse efforts a common purpose and direction, however, is the leadership provided by the thousands of Bell System managers whose responsibility it is to produce the results that, when the contribution of each has been added to all the others, will achieve the goals of our organization as a whole. In recent months I have been spending as much of my time as possible traveling among the Bell companies and meeting with managers of all levels. It is as much from my experience of these meetings as it is from the year's results themselves that I can state with confidence that—after difficult times—our business is on the move again. What is more, the competence and the can-do spirit that I encountered in these Bell managers wherever I have traveled confirms my conviction that it will keep on moving. You will meet some of them in the following pages.

Finally, no account of the Bell System's progress in 1972 would be complete without acknowledging the profound contribution to that progress of the man under whose leadership we began the year and set its goals. On March 31, H. I. Romnes retired after a distinguished Bell System career of some 43 years, the last five of which he served as AT&T's chairman and chief executive officer. That the Bell System has emerged from a difficult period with its strength undiminished and its prospects bright we owe in no small measure to the integrity of his decisions and the steadfastness of his commitment to public service. Mr. Romnes, I am glad to say, continues as a director of our company.

John D. deButts

February 12, 1973

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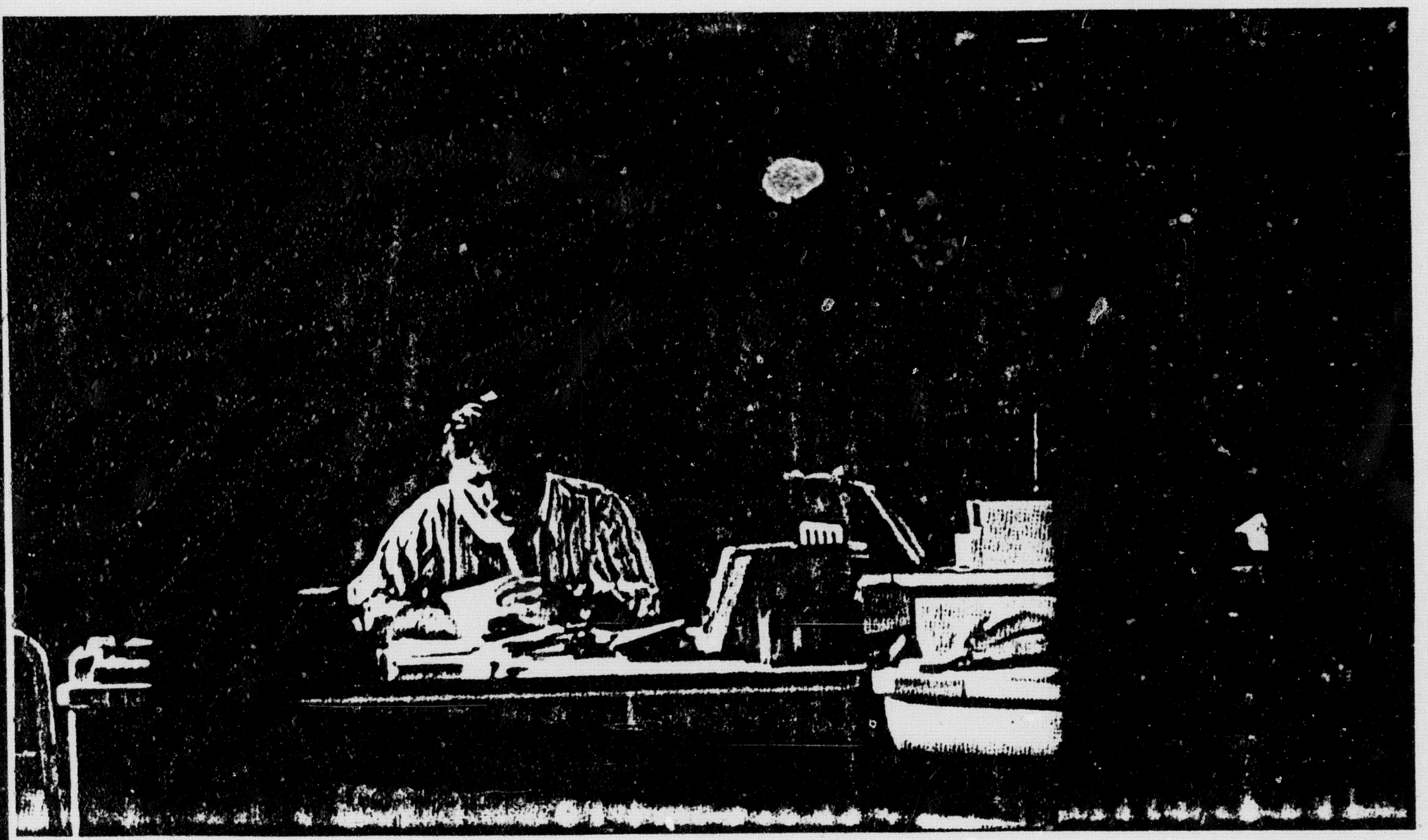
The Telephone Manager

The Bell System managers pictured in these pages are representative of the thousands more—in small towns and big cities, on construction sites, in switching offices, in factories and laboratories all across the country—to whom our business looks to coordinate and direct the resources required to meet its service and earnings goals. It is in large measure because they made these goals their own that the results reported in these pages were achieved—and it is to them that this report is dedicated. Shown here is Robert Chadwick, manager in Alliance, Nebraska (pop. 7,000).



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In 1972 the Bell companies added 5.1 million telephones, more than in any single year in our history. Bell telephones in service totaled 105.3 million at year's end.

During the year, the Bell System handled 410 million messages per business day—22 million more than in 1971—and long distance calling increased by over 10 per cent.

From these indicators it is clear that 1972 saw an end to the economic slowdown that dampened Bell System growth in the two prior years. Indeed, at year's end there was no major sector of telephone growth—save one—that did not match or exceed—in some cases by a considerable margin—the growth trends we have experienced since the end of World War II. Particularly strong was the growth in residence extensions and in the number of telephones serving small businesses. Large business demand still lagged long-term trends but moved up significantly during the year.

Responding to stepped-up marketing efforts, more customers ordered premium telephones than ever before. For example, of the 28 million telephones the Bell companies installed last year, about 14 per cent were Trimline® telephones with their dials (or pushbuttons) in the handset. And Touch-Tone® telephones accounted for about four out of every 10 telephones added in the 6,740 exchange areas—out of a total of 15,650—where this service is available.

During the year we continued our efforts to acquaint our customers with the economies of dialing their own long distance calls and calling at off-peak hours—and more and more telephone users are responding to this encouragement. In 1972 about 79 per cent of long distance calls were customer-dialed and the new interstate rates that became effective early this year provide a further stimulus to this trend.

Overseas calling continues to grow at a rapid pace. In five years it has more than tripled and, if recent trends continue, it will triple again by 1977. By 1980 we expect to be handling 200 million overseas calls compared with 39 million in 1972.

We plan a further expansion of direct dialing by customers of overseas calls—a service already available in parts of the New York and Washington metropolitan areas and a few other locations. By the end of 1973, we anticipate that it will be available in parts of most major U.S. cities. We expect that it will further stimulate calling internationally just as it has domestically.

Operating Results

In 1972, over-all Bell System revenues increased 13 per cent and operating expenses 12 per cent. Operating taxes totaled $3.8 billion, of which well over half went to state and local governments. Interest charges on debt obligations amounted to $1.5 billion—a 15 per cent increase over 1971. The rate of earnings on capital was 7.7 per cent, compared to 7.4 per cent last year. Net income totaled $2.5 billion, of which almost $1.5 billion was paid in dividends to three million holders of common shares and $146 million paid or committed to holders of preferred shares. In August, the Directors voted to increase the quarterly dividend from 65 to 70 cents per common share, the seventh increase since 1958.

Construction

In 1972 the Bell System spent some $8.3 billion to expand, improve, replace or relocate its physical facilities—about three-quarters of a billion dollars more than we spent for like purposes in 1971. This expenditure enabled us to add 32 million circuit miles to our nationwide network of transmission facilities and enough new calling capacity in local exchanges to serve six cities the size of Cleveland.

In the course of the year we installed 118 electronic switching systems (ESS), bringing to 324 the number of such systems we have installed since the first one was cut into service in

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"No question about it, we accomplished a lot in 1972. We improved service and reduced costs. Our entire work force today is more experienced and productive. The key to all this is the desire of the individual employee; our people—for the most part—want to do a good job. What we must continue to do is to provide a good work environment, good training, and the job will get done—and done well."

Joe Hunt, Assistant Vice President—Operations (Plant), AT&T

1965. In three years the number of telephones served by these fast-acting, versatile systems has climbed from 1.1 million to 6.2 million and we anticipate that a steady buildup in the pace of ESS production and installation will make its services available to fully half our customers by the mid-1980's.

We plan a like acceleration in the availability of the benefits of electronic consoles that enable operators to handle customer-dialed person-to-person, credit card, collect, third number and pay station calls much more expeditiously than they can from the traditional switchboards. At the end of 1971, some 7,800 of these consoles had been installed; by the end of 1972 there were over 11,000—in 82 places, their services available to almost 33 per cent of our customers.

Of 1972's construction expenditures, $1.0 billion was invested in modernization projects, like ESS, aimed at providing better, more efficient service to the public.

Another $400 million was spent for plant relocation—to make way for highway construction, for example—and for replacement of facilities no longer fully serviceable, including those damaged by storm.

In this connection, the "bill" for the damages to telephone plant as a consequence of Tropical Storm Agnes came to some $32 million, of which about $18 million was for construction of plant to replace that destroyed by the storm.

It should be noted that the pace at which service was restored in this emergency —often under conditions of acute discomfort—provides renewed

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evidence, if any were needed, of the value of Western Electric-telephone company teamwork and the vitality of the Bell System's tradition of service in emergencies. Most of the damage was centered in the territories of the Chesapeake & Potomac Telephone Companies, the Bell Telephone Company of Pennsylvania and the New York Telephone Company. We are confident, however, that had a like emergency occurred anywhere else in our territories, it would have been met with a like response.

Some $1.4 billion of 1972's construction budget was spent for "customer movement"—that is, putting in and taking out telephones as customers change their residence or business locations. The scale of this activity remains astonishing even to us. To "gain" the five million telephones we added to our lines in 1972, we installed 28 million, removed 23 million.

But by far the largest portion of our 1972 construction expenditures—$5.5 billion—was spent for growth, current and prospective. In this connection, it should be noted that we do not expect to see the steep rises in construction costs that have marked the recent past continued into the years immediately ahead. That does not mean that we foresee any significant slackening of demand for our services. It does mean that we see hope for some slackening of the pace of inflation, which has added some $5.5 billion to the cost of our construction over the past five years. What may be more significant is that the record-breaking construction outlays of recent years, undertaken as they were in the face of lagging demand and albeit at a cost in terms of current earnings, now serve us in good stead as we experience once again the strong growth in demand we knew would one day come and for which we knew we must be ready.

Where do the Bell System's construction dollars go?

During 1972, some $2.5 billion went to pay for the telephone company engineering and employment costs involved. Some $2.1 billion went to outside suppliers and contractors. And $3.7 billion went to the Western Electric Company for the communications hardware—the wire and cable, the switching machines and the transmission systems—it makes for the Bell telephone companies. But Western Electric, in turn, looks to thousands of suppliers, large and small, throughout the United States, for raw materials and components it uses in its own manufacture. Thus the Bell System's construction program makes a major contribution to the growth of the economy it aims to serve.

"The vital ingredient in the success of any request for higher rates, of course, is a high quality of service. But in addition, a telephone company has to demonstrate to the public that it is attempting to run the business with integrity and efficiency. No less important is a solid reputation for delivering on your promises and commitments."

John Hayes, Assistant Vice President—Revenue Requirements, Southwestern Bell

"Improved earnings is a two part thing. First we have to keep striving for internal efficiency. When this doesn't provide adequate earnings, though, we have to seek rate increases. On both counts, I think we've turned the corner. Certainly the efforts put forth by Bell System people to meet these goals and get the business moving in the right direction have been important factors in our success in achieving this year's earnings results."

Bill Burns, Assistant Treasurer, AT&T

Western Electric's performance last year, its contributions to the quality and economy of telephone service, the magnitude of its manufacturing and supply operations, were again impressive by any measure. The company produced 4.8 million lines of dial central office equipment and set new records in the production of telephone sets (over 10 million) and exchange cable (312 billion conductor feet). Moreover, the company achieved its manufacturing and service objectives without any increase in the prices of its products, which today average about 65 per cent of the prices of like products from other manufacturers. Rigorous expense control, record achievements in engineering cost reduction, and improvement in over-all productivity were the principal factors contributing to this success.

Western Electric sales last year amounted to $6.55 billion, compared to $6.05 billion in 1971.

Financing

Of the $3.7 billion in new money the Bell companies required to finance their construction last year, $2.5 billion was obtained through the public sale of debt securities by AT&T and 12 of its operating subsidiaries, and about $200 million from bank loans. Another $1.0 billion was obtained through a private placement consisting of $625 million of cumulative nonconvertible preferred stock and $375 million in 25-year notes. This private placement was negotiated in 1971 and the proceeds were taken down during the first half of 1972.

Interest costs on 1972 debt issues ranged from 6.47 to 7.75 per cent. At the end of the year, the average interest cost of all Bell System long-term debt outstanding stood at 6.15 per cent—up from 4.46 per cent just five years ago—and the ratio of debt to the Bell System's total capital was 47 per cent.

We do not believe that this ratio should go much higher.

To help assure that it does not, the Bell System is explicitly setting out to accomplish a further improvement in earnings per share sufficient to warrant a market price for AT&T shares that will permit an offering of common equity on terms that will maintain the integrity of the investment of existing share owners. While a sufficient range of financing alternatives remains to us to preclude the necessity to undertake such an offering in the near term, clearly our efforts must be addressed to advancing the day when it will be practical to do so.

It is to this end that we continue unremittingly our efforts to improve earnings through improving efficiency. And it is to this end that we continue—

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because we must—our efforts to reprice our services at levels that will provide us the opportunity to achieve earnings sufficient to make it feasible to undertake the common equity offerings that maintaining a sound financial structure and a top credit rating so clearly require.

In a move designed mainly to produce tax benefits for both AT&T and the New England Telephone and Telegraph Company, the parent organization tendered late in the year an exchange offer for additional stock in the New England firm that increased AT&T's ownership from over 71 per cent to 85.4 per cent. The exchange ratio was 8/10 of one AT&T share for one New England share.

Telephone Rates

In 1972 regulatory authorities in 36 jurisdictions authorized rate changes that will add approximately $700 million to Bell System annual revenues. In addition the Federal Communications Commission in late November authorized the company to file rate increases for its interstate

"Day in and day out, you need to reappraise where you're going and how well you're spending your dollars. But you should not do anything in your zeal for cost controls that will affect the business in the long run."

Betty Hunt, Toll Assistance Department Manager, Pacific Telephone

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services sufficient to produce $145 million in additional income before Federal Income Tax. Most of these rate changes became effective in January of this year and apply principally to operator-assisted calls, reflecting their higher costs, and to customer-dialed calls during the day-rate periods. Even with these increases, the level of interstate telephone rates today is below the level of 1953.

It is heartening to note that in the course of the year a number of states authorized rates of return approaching the level that we believe is desirable to assure sound financing of the very sizable construction program we must carry out to meet the public's growing communications needs under today's conditions. And in its November ruling, the FCC, while it authorized rate increases sufficient to produce a rate of return of 8.5 per cent on our interstate services, at the same time explicitly recognized that a rate of return of 9 per cent, assuming it can be achieved through improved efficiency, would be appropriate under today's conditions. This, we are confident, we can accomplish.

Nonetheless there remain many states in which the rate of return the Bell companies are earning on their invested capital is well below the level needed to meet today's competitive financing conditions, thereby placing our ability to provide continuing good service in these places in some jeopardy. In these jurisdictions we have no alternative but to press—and press hard—for rate increases that will produce the sustained earnings growth that is needed to support

"We were hard hit by Tropical Storm Agnes. Some of our people were wiped out—they had nothing left but the clothes on their backs. Yet they came to work anyway. The response was tremendous. I was impressed that people put in the kind of hours they did. That told me something; if it was strictly for compensation, I don't think they'd have put forth that kind of effort."

Bob Masoner, District Commercial Manager, Wilkes Barre, Bell of Pennsylvania

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continuing service growth.

Down through the years the Bell telephone companies have pursued a pricing policy aimed broadly at encouraging the development of their services and stimulating their usage. Installation charges, for example, have traditionally been kept low so that more and more people might enjoy the benefits of service. Today, however, universal service, the aim of our business from its beginning, has been virtually achieved. At the same time, customer requirements—and therefore the costs they occasion—have become more and more diverse. Accordingly the telephone companies are moving toward a restructuring of their charges that will match the rates for particular services more directly to their costs. For example, we are persuaded that we should recover the costs of moving, changing and installing telephones from the people who occasion these costs rather than from monthly charges that are applicable to all our customers, whether they move or not. Already regulatory authorities in a number of states have approved increases in installation charges that represent a step in this direction.

Another example: today, nobody pays for Directory Assistance—or, more realistically, everybody does. On the average about 50 cents of the residence customer's basic monthly charge goes to pay for Directory Assistance service. And yet a sizable majority of Directory Assistance calls are made by a relatively small percentage of customers. Accordingly it has been proposed that a charge be instituted for DA calls exceeding a basic allowance that would meet the needs of most customers. In a number of places where this proposal has been broached, it has been greeted by strong protests based, we are convinced, on misunderstanding. Its aim is *not* to increase revenues but simply and only to remove the burden of cost from the general body of customers and assign it to those who benefit from a disproportionate use of this service. We believe that the public will in time come to see the fairness of this proposal and we intend to seek authority to implement it.

Again in the interest of more nearly matching prices to costs, a number of the telephone companies are studying rate plans that separate—in proportion to their costs—the charges for telephone instruments and their installation from charges for access to our network. Similarly, we have under development a restructuring of interstate private line rates that, taking advantage of the economies of scale our high capacity routes afford, will permit us to charge lower rates on these routes,

"People today don't respond positively to autocratic management. They want to know why. Once they know why, there is a 110 per cent commitment to doing an outstanding job. If we changed our management practices tomorrow and explained why, we'd have a hundred supervisors scrambling to get there."

Stanley (Pete) Clow, Vice President and General Manager — Kansas, Southwestern Bell

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orthwestern Bell

"Our people in North Dakota have really worked hard to provide the best telephone service we can provide. I believe our customers expect this and are willing to pay for it. Anything less is no bargain at any price. But I also know we can't give good service without good earnings."

Bill Stauffer, Vice President and General Manager — North Dakota, Northwestern Bell

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somewhat higher rates elsewhere. This restructuring would represent the first departure from the principle of nationwide average pricing that has contributed so much to the development of communications in this country. The goals of nationwide average pricing of private line services having been substantially achieved, it now seems appropriate to consider charges more directly related to costs.

It is now nearly five years since the Bell companies—in response to the FCC's ruling in the Carterfone case—filed tariffs permitting connection of customer-owned devices and systems to Bell System lines through suitable telephone company-provided interfaces. For some time now the FCC has been inquiring into the feasibility of a further liberalization of interconnection policy. More specifically, what is being explored is whether a system of "certification" of equipment suitable for connection to the telephone network might not provide an appropriate alternative to current interface requirements. We are cooperating fully in this inquiry and with the joint board of federal and state regulators that the FCC has asked for recommendations. At the same time we have made no secret of our concern about the long-run consequences of the division of responsibility for service that a certification system would necessarily entail and the consequences as well in terms of added costs to the average customer. Until these and related questions have been thoroughly explored, we do not believe a responsible determination can be made as to whether certification is or is not in the public interest.

Ahead in Service

Many Bell System innovations, like the transistor (invented at Bell Laboratories just over 25 years ago) and the Telstar communications satellites, have won acclaim from scientists and laymen alike. Thousands of others are virtually unknown outside the scientific community. (Bell Laboratories, for example, has produced over 15,000 patents since it was founded in 1925—more than one every working day.) Yet it is to the cumulative effect of these innovations—rather than to any single startling breakthrough—that we owe the steady advance of the communications art down through the years.

For example, demand for data communications continued to grow in 1972, and technological developments emerging from Bell Laboratories are enabling us to more than keep pace with the needs of this important market, the potentialities of which we recognized as long ago as 1958 when we introduced our first Dataphone® data sets. Thus, last year we sought FCC permission to con-

"People in Indiana—like everybody, everywhere, I guess—insist upon good service. They can be critical when they feel they're not getting it. So we teach our telephone operators to try to satisfy customer requests for assistance however out of the ordinary they may be. We think it's good for our customers—they're better served—and good for our operators—they feel more pride in being able to handle the out-of-the-ordinary call."
Bill Davis, District Traffic Manager,
Indiana Bell

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"What a job our people in New York have done. We've experienced the biggest turnaround in the history of any telephone company. Service is back. It has to be our greatest team effort ever."
Sal Barbera, Assistant Vice President—Network Operations, New York Telephone

struct a digital data system that by the mid-seventies will link almost a hundred cities. Thanks to a new technique called "Data-Under-Voice," or DUV, the digital system can be deployed and operated far more economically than once thought possible. The system will provide digital services at speeds that range up to 56 kilobits per second.

In another development reflecting advances in technology, AT&T requested FCC permission to move ahead with full-scale implementation of a new high-capacity mobile communications system. Through techniques that make highly efficient use of the frequency spectrum, the system would, for the first time, make available to all customers who wish it, a wide range of mobile communications services as good as regular telephone services.

The astonishing growth in overseas calling impelled us last year to seek authorization to lay new telephone cables of advanced design under both the Atlantic and the Pacific Oceans. In July, the FCC authorized AT&T and three international record carriers to construct a sixth transatlantic cable. TAT-6 will provide upwards of 4,000 two-way voice grade circuits—more than four times the capacity of TAT-5 which was completed two years ago. The new cable is scheduled for operation by early 1976.

Meanwhile, AT&T has requested FCC approval for construction of an 845-circuit cable between Hawaii and Okinawa to supplement existing links to the Far East. It would connect with a cable we have proposed from California to Hawaii, which has been under FCC consideration for over a year.

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AT&T's undersea cable proposals are in keeping with our advocacy of a roughly fifty-fifty mix of cable and satellite circuits as the best assurance of continuity of service in the event of a failure in one mode or the other.

In December the FCC gave a go-ahead to the company's proposal to use communications satellites as an integral part of its network of facilities serving the U.S. The Communications Satellite Corporation (Comsat) will provide the space segment of the proposed system.

While we are gratified by the Commission's go-ahead, we remain concerned by the restrictions it places on our use of satellites that would bar us—for a period of three years—from using satellites for private line services. An important matter of principle is involved here. We believe that it is technically and economically unsound to prevent the Bell System or any other carrier from applying any available technology to any of its services when it makes sense to do so.

Meanwhile developments were underway that will greatly enhance our ability to switch and transmit calls over terrestrial routes. Bell Laboratories engineers have developed a new coaxial cable system with a capacity of 108,000 voice channels. The new communications "superhighway" will far exceed the capacity of the largest system now in use, which carries 32,400 voice channels. The new system will be ready for commercial service in early 1974 over a route between Pittsburgh and St. Louis.

At about the same time we will begin field tests of a transmission system,

"I recall a case where it took a team of operators something like eleven hours to locate a serviceman in Korea so he could take a call about a death in the family. This wasn't an above-the-call-of-duty kind of example. It's their job. But my point is that it was not only their job; they wanted to do it."

Bob Beck, Vice President and General Manager—Western Area, AT&T Long Lines

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"The job of forecasting growth is a big one. The type of growth people don't see is growth in data transmission. Industry, of course, is using the telephone more to transmit data of all kinds and this means we have to put in new cable and other facilities. Our circuits are being used increasingly for this purpose and the new plant must be in to handle growth as it occurs."

Charles Hugel, Operating Vice President, New Jersey Bell

known as the millimeter waveguide, which will offer even further advantages—voice-channel capacity up to about 230,000 two-way simultaneous calls, and lower costs.

A new electronic toll switching system scheduled for introduction by early 1976, will handle about 350,000 long distance calls an hour—three times as many as the finest electromechanical toll system now in use anywhere. Moreover, it will take up less space, be easier to maintain, and will provide the flexibilities of stored computer programming.

An increasingly important aspect of Bell Laboratories' work these days has not to do with the development of communications hardware, but with the creation of "software"—i.e., programs, concepts, ideas and techniques that promise significant improvement in our ability to manage business operations that constantly grow in size and complexity.

For example, a computer-programmed approach to the forecasting of future needs for switching equipment provides not only economy and speed but the assurance that our switching centers will more precisely fit the needs of the communities they are designed to serve. Similarly newly developed computer-programmed inventory control systems help us conserve capital by optimizing the utilization of plant facilities.

In another aspect of our operations, a computer-controlled test system provides centralized automatic measurements of trunk circuits throughout an entire metropolitan area, or even an entire state. The measurements check signal loss and transmission noise, then provide computer print-outs summarizing troubles requiring corrective action. A field trial in the San Francisco Bay area concluded successfully in 1972.

Likewise new techniques and technologies are being applied to the Bell System loop plant, the tree-like network of wires and cables that connect the individual telephone customer to the central office. Attention to the loop plant has increased to meet two trends: an unprecedented increase in the anticipated number of telephone main stations and the increasing movement of customers.

This movement and expansion will be met by new types of cable, new connective systems and terminals, improved loop electronics, a newly designed main distributing frame, more efficient maintenance procedures and stepped-up efforts in planning and administration.

To help reduce the costly changes in the loop plant's network of cables and wires that must be made when telephone customers move, a team from AT&T, Bell Laboratories and several Operating Companies created the Serving Area Concept, or SAC. Now on field trial in several Operating Companies, SAC is a much-improved method of making changes in the wires to individual homes. With SAC, changes in the cable distribution are more efficient, less costly and more convenient.

These and other developments are important not only for the efficiencies and cost-savings they provide. Equally if not more important is the fact that our increasing use of computer technology is freeing our management people to do more of what they are paid to do—think and create; use judgment, initiative and imagination; find ways to apply personal consideration in their dealings with customers as well as employees; in short, to manage better.

Another service improvement introduced in 1972 will particularly benefit rural customers and areas of sudden growth. Up to now, individual line service in rural areas has not been the norm, because of the high cost involved. Through an interleaving tech-

"Western Electric's day-to-day relationship with the Operating Companies helps keep us abreast of customer needs. Our regional organization shortens our lines of communications and improves the speed of our response. I'll bet I talk as many as five times a day with my Telephone Company counterpart to make sure our programs are meeting his needs."
Howard Nilson, General Manager—Southwestern Region, Western Electric

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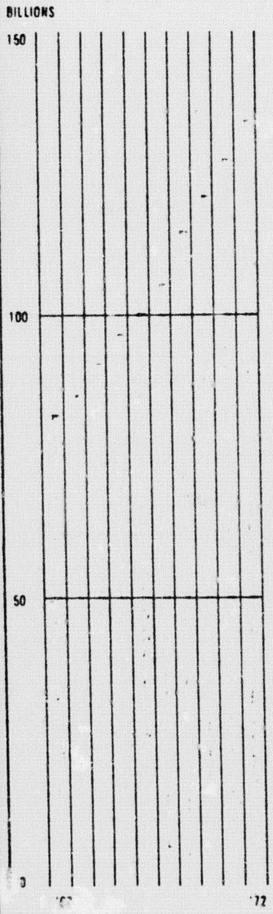
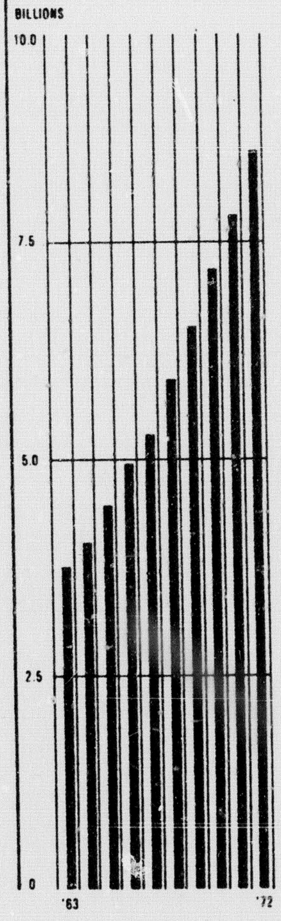
Exhibit 7M

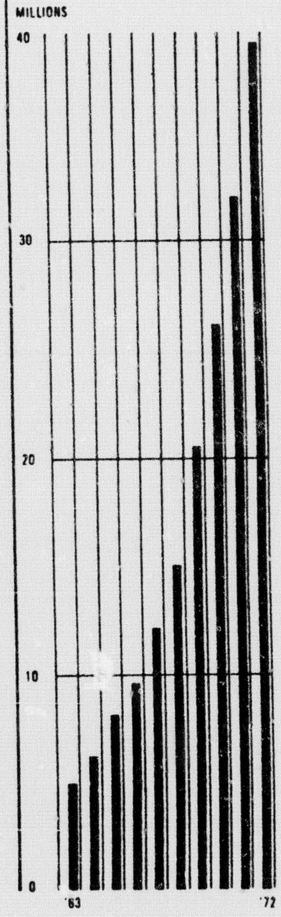
Telephone Conversations
In 1972, the Bell companies handled more calls than ever before—by some seven billion conversations.



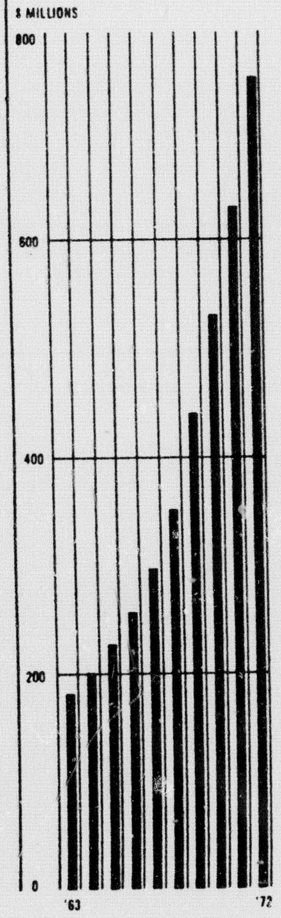
Long Distance Messages
Long distance calls increased by over 10 per cent. In 1972 customers dialed 79 per cent of long distance calls.



Overseas Conversations
We handled over 20 per cent more overseas calls than in 1971, over 200 per cent more than five years ago.



Data Service Revenues
Our data service revenues —from both private line and Dataphone services —increased by 18 per cent in 1972.*



Construction Expenditures
We spent $8.3 billion last year to expand, modernize, move, or replace Bell System facilities.

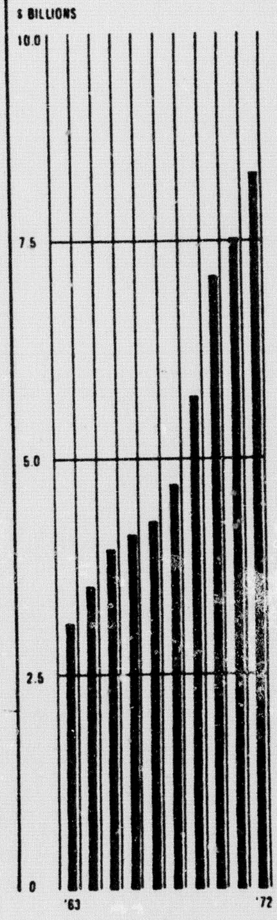


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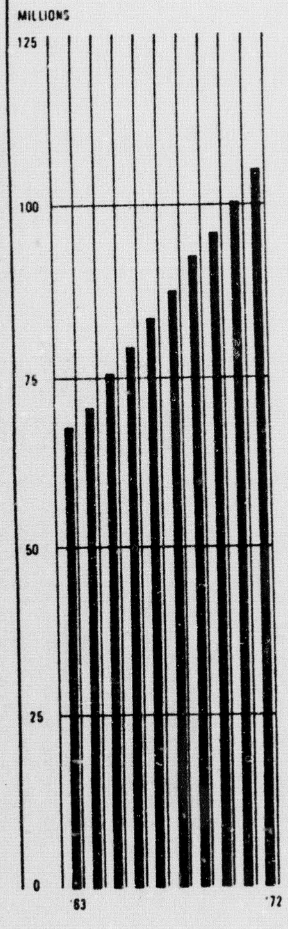
Exhibit 7M

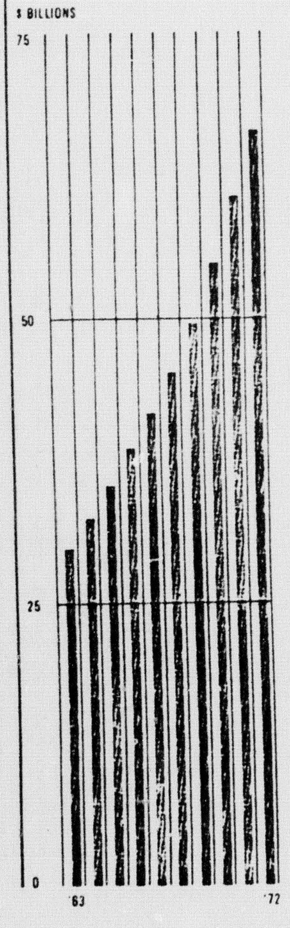
Total Telephones

We gained over five million telephones in 1972—1.2 million more than in 1971.



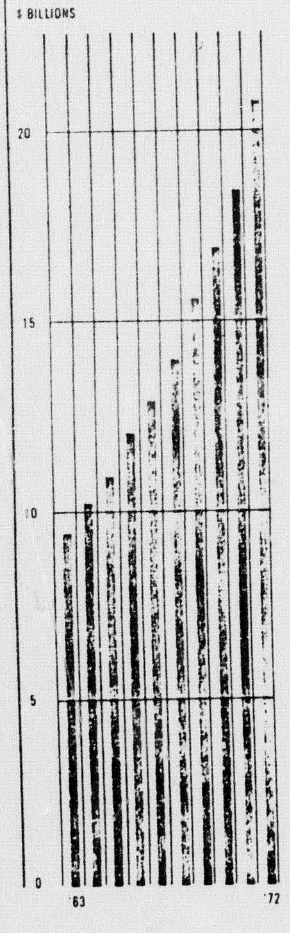
Total Telephone Plant

Our equipment and facilities have more than doubled in the past eight years. Total telephone plant at year's end stood at $67 billion.



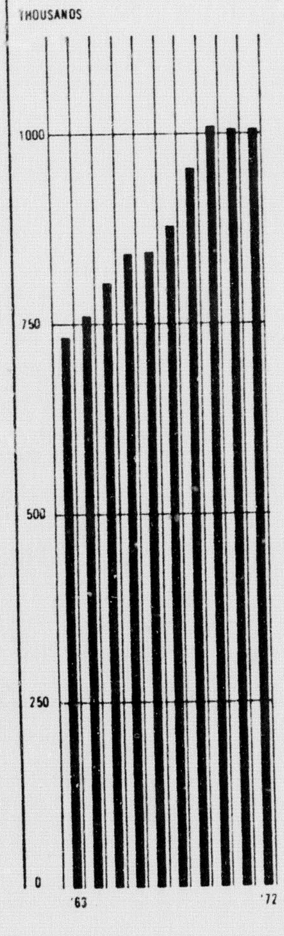
Total Revenues

Bell System revenues in 1972 exceeded $20 billion, reflecting the economy's upturn and necessary rate adjustments.



Total Employees

At year's end the Bell System employed just over 1,000,000 men and women, only a few more than a year ago.



Common Share Earnings

1972 saw a resumption of the improvement in common share earnings that characterized most of the 1960's. Net income applicable to AT&T common shares increased by over 10 per cent.

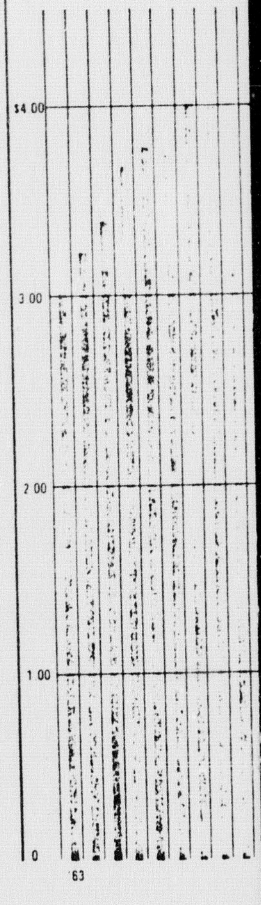


Exhibit 7M

"Back in the old days, it was a lot simpler for a human being to keep up with records needed for the business. Today there's a whole new order of complexity. This is why we have a new organization to centrally develop a new business information system."

John Coruthers, Assistant Vice President — Business Information Systems, Illinois Bell

nique that combines several simultaneous signals on the same line, a newly developed multiplexing system can serve up to 80 telephone lines using only two cable pairs from a central office, thereby permitting telephone companies to offer more economical individual service or to put fewer customers on each line.

Services for Government

The Federal Government is the largest user of the Bell System's communications services and no customer presents us with more varied and sophisticated requirements. The Federal Telecommunications System, serving the civilian agencies, is today larger than the Bell System's entire interstate network was in 1950. The Autovon network, which the Bell System and a number of independent telephone companies built and now operate for the Department of Defense, incorporates the most advanced transmission and switching facilities, including 51 electronic switching offices, to assure fast, flexible—and secure—communications among military installations throughout the U.S.

Also in 1972, the Western Electric Company continued at the request of the government as prime contractor for the Army's Safeguard antiballistic missile system, an undertaking now reduced in scale as a consequence of the signing of strategic arms limitations agreements by the U.S. and the Soviet Union. As it has for some 20 years, Western Electric's subsidiary, Sandia Corporation, continued opera-

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Exhibit 7M

"Bell Labs cannot just consider design and manufacturing costs. It'd be easier if we could. But beyond first costs, we must also consider operating costs. If you don't provide maintenance features, sure, you can cut initial costs. But you pay for your thrift again and again—in testing, in installing, and in hiring the people to service the system once it's in. Besides, service will also suffer."

Eric Sumner, Executive Director—Loop Transmission, Bell Telephone Laboratories

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Exhibit 7M

tion of Sandia Laboratories for the Atomic Energy Commission on a no-profit, no-fee basis.

On April 1, 1972, Bellcomm, Inc., a subsidiary of AT&T and Western Electric, was merged with Bell Telephone Laboratories. This was no routine corporate rearrangement. Rather did it mark the successful completion of the mission of an organization altogether unique in the Bell System. Staffed almost entirely by scientists and engineers and comprising no more than 490 employees at its peak, Bellcomm was established in 1962 at the request of the National Aeronautics and Space Administration for the purpose of providing systems engineering assistance to Apollo, the nation's manned lunar flight program.

AT&T's directors took note of Bellcomm's accomplishments in a resolution praising the members of the organization for their "distinguished role in one of history's great technological achievements, reflecting credit on the Bell System and helping to fulfill a major aspiration of the people of the nation and the world."

"Anticipating what technology we'll have available to provide service is a critical element in our long range planning for the future. In this area our bedrock has been and will be Bell Laboratories. Fortunately, Bell Labs has been a leader in technological change, and so the burden is on us to sharpen our planning so as to make the latest technology available, as needed, to do the job."

Joe Bader, Engineering Director—Systems Planning, AT&T

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Exhibit 7M

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Human Resources

The Bell System began 1972 with 1,000,573 employees, ended it with 1,000,772. That the Bell companies were able to cope with a steady buildup in the volume of business they handled during the course of the year with virtually no increase in employment attests not only to the effectiveness of management efforts to improve productivity but to the growing proficiency of the Bell System's work force. Turnover rates, which had risen to troubling levels in several places—notably some of our larger cities—were lower, reflecting not only economic conditions but intensified efforts to acclimate younger employees to their jobs and equip them to perform to their own as well as to the company's satisfaction.

In the course of the year the Bell companies expanded the application of job enrichment programs to a wider range of jobs. These programs spring from a recognition that there may be limits to the productivity advances that can be accomplished by such traditional methods as work simplification and fragmentation. Now, instead of simplifying jobs, we seek to enlarge them. Instead of fragmenting assignments, we seek to enhance their challenge.

The concept of job enrichment is not new but we know of no other business in which it has been tried—and proven—on such a scale or in so wide a range of occupations. The potential of this approach—both in terms of enhanced performance and employee satisfaction—is perhaps best conveyed—not by statistics, although it can be—but by the observation of a young Indiana Bell employee whose responsibilities had been enlarged from a single repetitive aspect of directory preparation to complete accountability for the directories of three suburban towns: "When I put out the first directory all by myself," she said, "I just—well I just floated. I really felt satisfaction in it."

As a further effort toward assuring equality of opportunity in our business, all the Bell companies in the course of the year adopted revised Affirmative Action Programs specifying the levels of representation of minorities and women they would seek to attain over the years ahead at every level of our business and in every occupation. They also adopted an Upgrade and Transfer Plan aimed at enlarging the scope of opportunity for all employees by facilitating interdepartmental movement for qualified people.

In mid-January, 1973, AT&T and its associated telephone companies reached an agreement with the U.S. Department of Labor and the Equal Employment Opportunity Commission

"The biggest part of what we spend on construction goes to meet the demand for new telephone service—in other words, growth. But meeting the demand for new service or maintaining the old—service is what it's all about. For me, that means being ready with the equipment and the buildings to supply service wherever and whenever our customers expect it."

Marvin Glass, Building Engineer, Pacific Northwest Bell

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Exhibit 7M

"We're going to continue to be an attractive business. Demand for communications is booming. We're moving faster to meet that demand with new products, new and better services. Management is younger, more aggressive. Many top officers in their forties. Plenty of drive. I see this as an indication of a more creative, forward-looking response to the demands of the business."

Vicki Bruni, Statistician — Economic and Financial Studies, New Jersey Bell

on a comprehensive program aimed at facilitating the movement of qualified women and minority group members into better jobs. The EEOC has in turn moved to dismiss the case against the Bell companies that it brought before the Federal Communications Commission in December of 1971.

Under this agreement, one-time payments totaling approximately $15 million are going to some 15,000 present employees who may have been delayed in transferring to better-paying jobs. The effect of these payments has been reflected in the 1972 earnings figures contained in this report.

We view this agreement as a further step in the Bell System's continuing efforts to assure equal opportunity throughout our business and to assure that our practices conform to current legal requirements in this rapidly evolving field. Under its terms, qualifications remain, as they must, the fundamental criterion for advancement in the Bell companies. The further expansion of opportunity now afforded and the incentives it inspires will, we believe, strengthen our business'

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Exhibit 7M

"We're winning a substantial majority of our competitive cases where we and someone else are bidding for a communications contract. Our advantage is in the quality of our equipment and the responsibility we take for its continuing maintenance. And while other companies may come up with special selling features, if you look at all the costs—especially the long term costs—our successes tell us that we're the best."

William Mobraaten, Vice President—Administration, Pacific Telephone

capability for the long term.

As the press (and our own advertising) has noted, the Bell companies employ a number of male operators and a number of women are employed on outside craft jobs as well. Whether this trend will prove significant, only time and gathering experience will tell. In any case, what should be plain is that we have no male jobs, no female jobs, no black jobs and no white jobs. What counts is the ability to perform the work and a readiness to do one's best.

At the end of the year, minorities accounted for about 13 per cent of total Bell System employment, four per cent of management employment. Women held 28 per cent of management posts.

Down through the years the Bell System has been fortunate in its ability to attract to its ranks a great number of people whose personal commitment to service they express not only on the job but in a wide range of community endeavors. Today more and more of these activities, including those sponsored by the Telephone Pioneers of America, are addressed to the more urgent and seemingly very nearly intractable problems of our times: the problems of our cities and the problems posed for us by the prospect of a deteriorating environment. All across the country Bell System people may be found in the ranks of concerned citizens who devote countless hours they might otherwise devote to themselves to such activities as tutoring potential school dropouts and fighting drug addiction.

In 1972, the Bell companies themselves continued unabated a wide range of programs reflecting their recognition that over the long run the vitality of our business and the vitality of the communities we serve are inseparable. Some of the companies sponsor work-study programs for young people who might otherwise be required to leave school. Some provide business counsel to school administrators. Some sponsor clinics for minority enterprises and some operate day-care centers for the children of employees.

Like their community activities, the companies' contributions programs are diverse. Each is separately administered to meet local needs. Total Bell System contributions in 1972 amounted to $16.2 million.

Organization

From the early years of this century the Bell System has been well served by the organizing principles established for it by Theodore N. Vail, our business' first general manager and AT&T's president from 1907 to 1918. It is his concept of a nationwide association of companies, each separately managed but all joined in common purpose and sharing common operating procedures, that permits our

Exhibit 7M

business to achieve coordination on a national scale at the same time that it remains responsive to the unique needs of each community it serves.

It is now more than fifty years since Vail relinquished the helm. Thus it is not surprising that today we confront changes in our operating environment unforeseen in his time. In Vail's day, our business served what was still a nation of neighborhoods; today we serve what has become to all intents and purposes one neighborhood. Today—to a degree beyond envisioning in Vail's day—the Bell System network is—because it must be--a single nationwide entity, each of its trillions of parts compatible with all the others. And today our business and the industry of which it is a part confront a range of fundamental policy issues, most of them new in the last decade, requiring that each Bell company take account of the impact of its action on all the others. But for all the changes that have occurred since his time, none contradicts—indeed they confirm—the soundness of the fundamental principle of organization that Vail so firmly stated more than half a century ago. Now more than ever we must be one System.

It was to this end that—almost a year ago and coincident with the announcement of the company's new leadership—AT&T undertook a major restructuring of its headquarters organization. More specifically the aims of this reorganization were threefold:

—to strengthen the coordination of the resources required to give good service.

—to strengthen coordination of the Bell System's relationships with the main constituencies that affect our business: investors, employees and the public at large.

—to strengthen our business' long-range planning capabilities.

Accordingly today AT&T's General Departments are deployed in three major groupings. Reporting to the president are those departments responsible for the company's financial activities and the conduct of its relationships with government, with the public and with employees. Reporting to the vice chairman are those departments responsible for overseeing Bell System operations, assuring the quality of Bell System service and the effective management of the technological resources necessary to provide it. To this end, he oversees the company's interest in the Western Electric Company and Bell Telephone Laboratories. A third grouping, reporting to the executive vice president, is responsible for corporate planning studies, market and service plans and the application of economics and the management sciences to the solution of business problems.

Under the direction of the Chairman, these three officers and the vice president and general counsel comprise AT&T's Executive Policy Committee. It is through this committee that the Bell System sets its course on matters of fundamental corporate policy.

The Executive Policy Committee does not operate in isolation. Indeed, it is explicitly pledged to propose no policy affecting the interest of any or all of the associated companies without full consultation with them.

It is for this purpose that—almost monthly—the Executive Policy Committee meets with the presidents of all the associated companies. Some of these meetings last but one day, some for a full business week. Some are addressed to immediate problems, some to longer-range objectives. All are aimed at making the experience of each of our associated companies available to all of them. Their aim is to take full account of the diverse conditions our companies face and from it to develop the common understanding that will permit our business at one and the same time to achieve national coordination and meet local needs.

Finally, it is in these meetings that the Bell System's goals are set and commitments made to their achievement. It is very largely as a consequence of the determinations made at these meetings and the sharing of those determinations throughout our business that this record of 1972 is one of commitments met and goals achieved.

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THE FINANCIAL STATEMENTS on the following pages consolidate the accounts of American Telephone and Telegraph Company and its telephone subsidiaries. These companies maintain their accounts in accordance with the Uniform System of Accounts prescribed by the Federal Communications Commission.

These financial statements have been prepared in conformity with generally accepted accounting principles, which are consistent in all material respects with the accounting prescribed by the Federal Communications Commission, except as to revenue refunds and investments, as discussed in Notes to Consolidated Financial Statements.

Lybrand, Ross Bros. & Montgomery, Certified Public Accountants, have examined these financial statements and their report is shown below. The other auditors referred to in their report are Arthur Young & Company as auditors of Western Electric Company and Southwestern Bell Telephone Company, and Arthur Andersen & Co. as auditors of Illinois Bell Telephone Company.

A. L. Stott
Vice President and Comptroller

Report of Independent Certified Public Accountants

To the Share Owners of American Telephone and Telegraph Company: We have examined the consolidated balance sheet of American Telephone and Telegraph Company and its telephone subsidiaries as of December 31, 1972 and the related statements of income and reinvested earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We previously examined and reported upon the consolidated financial statements of the Company and its telephone subsidiaries for the year 1971, which have been restated as described in note (b) to the financial statements. The financial statements of two telephone subsidiaries included in the consolidated financial statements (constituting total assets of $8,752,572,000 and $7,960,911,000 and total operating revenues of $3,274,481,000 and $2,968,491,000 included in the consolidated totals for 1972 and 1971, respectively) were examined by other auditors. The consolidated financial statements of Western Electric Company, Incorporated and Subsidiaries, the Company's nonconsolidated subsidiary (which statements reflect net income of $282,941,000 and $258,412,000 included in consolidated net income of the Company for 1972 and 1971, respectively) were also examined by other auditors. The reports of other auditors have been furnished to us and our opinion expressed herein, insofar as it relates to the amounts included in the consolidated financial statements for subsidiaries examined by them, is based solely upon such reports.

In our opinion, based upon our examination and the reports of other auditors and subject to the possible effect, if any, of the proposed income tax regulations referred to in note (d) to the financial statements, the consolidated financial statements on pages 30 to 37 present fairly the consolidated financial position at December 31, 1972 and 1971, the consolidated results of operations and the consolidated changes in financial position for the years then ended of American Telephone and Telegraph Company and its telephone subsidiaries, in conformity with generally accepted accounting principles applied on a consistent basis.

LYBRAND, ROSS BROS. & MONTGOMERY

1251 Avenue of the Americas, New York, N.Y.
February 9, 1973

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Consolidated Statements of Income and Reinvested Earnings

	Thousands of Dollars Year 1972	Year 1971 (b)
OPERATING REVENUES		
Local service	$10,362,884	$ 9,135,486
Toll service	9,771,433	8,632,842
Miscellaneous	908,718	828,137
Principally from directory advertising		
Less: Provision for uncollectibles	138,923	154,333
Total operating revenues	20,904,112	18,442,132
OPERATING EXPENSES		
Maintenance	4,293,806	3,776,617
Depreciation	3,041,726	2,764,240
Portion of the cost of depreciable plant charged against current operations		
Traffic	1,668,831	1,586,748
Costs, principally operators' wages, incurred in the handling of messages		
Commercial	720,180	646,515
Primarily costs of local business office operations		
Marketing	895,050	806,766
Accounting	606,508	555,078
Research and fundamental development	149,362	133,963
Provision for pensions and other employee benefits (c)	1,510,668	1,221,957
Other operating expenses	1,028,861	900,214
Less: Expenses charged construction	396,774	317,501
Total operating expenses	13,518,218	12,074,597
Net operating revenues *(carried forward)*	$ 7,385,894	$ 6,367,535

For notes, see pages 35 through 37

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Thousands of Dollars

	Year 1972	Year 1971 (b)
Net operating revenues *(brought forward)*	$7,385,894	$ 6,367,535
OPERATING TAXES		
Federal income (d)	1,669,913	1,433,131
State, local and social security	2,136,823	1,880,698
Total operating taxes	3,806,736	3,313,829
Operating income	3,579,158	3,053,706
OTHER INCOME (e)	447,917	436,707
Income before interest deductions	4,027,075	3,490,413
INTEREST DEDUCTIONS	1,495,017	1,288,382
NET INCOME (d)	$ 2,532,058	$ 2,202,031
EARNINGS PER COMMON SHARE (d) *based on average common shares outstanding, 549,501,000 in 1972 and 549,304,000 in 1971, after recognition of preferred dividend requirements of $145,730,000 for 1972 and $48,830,000 for 1971*	**$4.34**	**$3.92**
REINVESTED EARNINGS		
At beginning of year as previously reported	$10,615,162	$ 9,879,267
Adjustment for revenue refunds (b)	37,666	—
As restated	10,577,496	9,879,267
Add—Net Income	2,532,058	2,202,031
	13,109,554	12,081,298
Deduct—Dividends declared:		
Preferred	149,765	57,984
Common—1972, $2.70 per share; 1971, $2.60 per share	1,483,146	1,428,191
Miscellaneous—net	949	17,627
	1,633,860	1,503,802
REINVESTED EARNINGS AT END OF YEAR	$11,475,694	$10,577,496

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Consolidated Balance Sheets

	Thousands of Dollars	
	December 31, 1972	December 31, 1971 (b)
ASSETS		
TELEPHONE PLANT—at cost		
Land, buildings and equipment		
In service	$63,920,261	$57,615,595
Under construction	3,086,288	2,878,235
Held for future use	75,707	74,124
	67,082,256	60,567,954
Less: Accumulated depreciation	14,482,348	13,370,886
	52,599,908	47,197,068
INVESTMENTS (f)		
At equity	3,118,431	3,112,363
At cost	108,832	148,122
	3,227,263	3,260,485
CURRENT ASSETS		
Cash and temporary cash investments—less drafts outstanding: 1972, $271,441,000; 1971, $213,732,000 (g)	1,086,346	922,752
Receivables—less allowance for uncollectibles: 1972, $28,334,000; 1971, $30,578,000	2,737,742	2,318,430
Material and supplies	337,987	313,541
Prepaid expenses	128,376	102,560
	4,290,451	3,657,283
DEFERRED CHARGES	507,423	404,499
TOTAL ASSETS	$60,625,045	$54,519,335

For notes, see pages 35 through 37

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	Thousands of Dollars	
	December 31, 1972	December 31, 1971 (b)
LIABILITIES AND CAPITAL		
EQUITY		
American Telephone and Telegraph Company		
Preferred shares—par value $1 per share		
Authorized 50,000,000 shares		
$4 Convertible preferred shares—at stated value $50 per share (h)	$ 1,373,008	$ 1,373,158
Outstanding at December 31, 1972, 27,460,000 shares		
$77.50 Preferred shares—at stated value $1,000 per share (i)	625,000	—
Outstanding at December 31, 1972, 625,000 shares		
Common shares—at par value $16⅔ per share (h) (j)	9,228,572	9,155,163
Authorized 750,000,000 shares		
Outstanding at December 31, 1972, 553,714,000 shares		
Premium on shares	5,449,011	5,300,752
Proceeds in excess of preferred stated value and common par value		
Reinvested earnings—*see page 31*	11,475,694	10,577,496
	28,151,285	26,406,569
Minority interests (j)	736,650	843,628
	28,887,935	27,250,197
DEBT (k)		
Long and intermediate term	24,143,326	21,228,326
Interim—notes payable	1,876,319	1,600,010
	26,019,645	22,828,336
CURRENT LIABILITIES		
Accounts payable	1,636,553	1,479,313
Advance billing and customers' deposits	528,336	464,367
Dividends payable	438,941	397,142
Taxes accrued	961,294	698,351
Interest accrued	413,910	347,013
	3,979,034	3,386,186
DEFERRED CREDITS		
Unamortized investment tax credit	874,496	644,436
Deferred income taxes	832,318	389,451
Other	31,617	20,729
	1,738,431	1,054,616
TOTAL LIABILITIES AND CAPITAL	$60,625,045	$54,519,335

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Consolidated Statements of Changes in Financial Position

	Thousands of Dollars Year 1972	Year 1971
SOURCE OF FUNDS:		
From Operations		
Net Income	$ 2,532,058	$ 2,202,031
Add—Expenses not requiring funds:		
Depreciation	3,041,726	2,764,240
Deferred income taxes	442,867	275,093
Investment tax credit—net	230,060	53,142
Less—Income not providing funds:		
Interest charged construction	208,718	206,053
Share of the income, after dividends, of companies accounted for on an equity basis	136,782	132,104
Total funds from operations	5,901,211	4,956,349
From Financing		
Issuance of shares *(principally preferred)*	846,518	1,379,981
Issuance of long and intermediate term debt	2,950,000	3,180,000
Change in interim debt—net	276,309	(605,325)
	$ 9,974,038	$ 8,911,005
APPLICATION OF FUNDS:		
Telephone plant	$ 8,081,514	$ 7,205,042
Dividends	1,632,911	1,486,175
Change in minority interests	106,978	(45,352)
Change in deferred charges	102,924	45,858
Repayment of long-term debt	35,000	200,000
Change in cost of investments	(17,490)	56,391
Change in working capital	40,320	(52,279)
Other—net	(8,119)	15,170
	$ 9,974,038	$ 8,911,005

The change in working capital is accounted for by:	Year 1972	Year 1971
Increase in current assets:		
Cash and temporary cash investments, net of drafts	$ 163,594	$ 50,142
Receivables	419,312	131,703
Material and supplies	24,446	25,912
Prepaid expenses	25,816	10,481
	633,168	218,238
Increase (decrease) in current liabilities:		
Accounts payable	157,240	168,609
Advance billing and customers' deposits	63,969	40,739
Dividends payable	41,799	28,000
Taxes accrued	262,943	(30,231)
Interest accrued	66,897	63,400
	592,848	270,517
Change in working capital	$ 40,320	$ (52,279)

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Exhibit 7M

Notes to Consolidated Financial Statements

(a) Accounting Policies—The financial statements reflect the application of certain accounting policies described in this note. Other policies and practices are covered in notes (c) and (g).

Consolidation — The consolidated financial statements include the accounts of the American Telephone and Telegraph Company and its telephone subsidiaries. All significant intercompany transactions are excluded from these statements except as discussed below under *Purchases from Western Electric*. The investment in Western Electric Company, Incorporated, an unconsolidated subsidiary, and certain other investments (where it is deemed that the Company's ownership gives it the ability to exercise significant influence over operating and financial policies) are carried at equity. All other investments are carried at cost.

Purchases from Western Electric — Most of the telephone equipment, apparatus and materials used by the companies consolidated has been manufactured or procured for them by Western Electric Company. Contracts with the telephone companies provide that Western's prices to them shall be as low as to its most favored customers for like materials and services under comparable conditions. The consolidated financial statements reflect items purchased from Western at cost to the companies, which cost includes the return realized by Western on its investment devoted to this business.

Depreciation—Provision for depreciation (5.2% in 1972 and 1971 of the cost of depreciable plant in service) is based on straight-line composite rates. Depreciation for income tax purposes is determined on different bases and methods as explained under *Income Taxes* below.

Income Taxes:

(1) Under various accelerated depreciation provisions of the tax law, depreciation for income tax purposes on plant placed in service after 1969 is greater than the straight-line depreciation provided in the accounts. Provision is made ("normalization") for the deferred income taxes resulting from the use of accelerated depreciation and is included in income tax expense ($438,402,000 in 1972 and $272,869,000 in 1971). Also see note (d).

(2) The companies have consistently followed the practice of deducting for income tax purposes certain taxes and payroll-related construction costs which are capitalized in the financial statements. In addition, interest charged construction is excluded from taxable income. The resulting effect on income taxes, to the extent it is not offset by a related reduction in depreciation expense for tax purposes, is reflected in net income. In recent years deductions and exclusions for tax purposes which are related to construction costs have increased, resulting in lower income taxes in relation to net income.

(3) Investment tax credits have been deferred and are being amortized by credits to operating income over the life of the plant which gave rise to the credits.

Research and Fundamental Development — Basic research and fundamental development costs are expensed currently. The cost of specific development and design work incurred by Western Electric Company is related to products manufactured and is included in the cost of such products.

(b) Revenue Refunds—The financial statements for 1971 have been adjusted to recognize the effect of revenue refunds in California, Virginia, and West Virginia as a result of regulatory and court orders in those states. Amounts applicable to 1970 and 1971, net of income tax, were charged directly to reinvested earnings in the books of account in 1972 (under accounting prescribed by the Federal Communications Commission); however, in accordance with generally accepted accounting principles, the income statement for 1971 has been restated and the opening balance of reinvested earnings for 1972 has been adjusted. Such restatement reduced 1971 net income by $37,666,000 ($.07 per share).

(c) Provision for Pensions and Death Benefits — The Company and its consolidated subsidiaries have non-contributory plans covering all employees and providing for service pensions and certain death benefits. These companies have accrual programs under which actuarially determined regular payments are made to trust funds that are irrevocably devoted to service pension and death benefit purposes. The total provision for these service pensions and death benefits, including amounts charged to construction, was $986,319,000 in 1972 and $779,871,000 in 1971. Amendments to the Plan on June 1, 1971 and October 1, 1971 provided for improved benefits and resulted in increased pension accruals beginning October 1, 1971. The cost of these changes was about $184,592,000 in 1972 and $43,711,000 in 1971.

(d) **Depreciable Lives of Certain Plant for Income Tax Purposes**—In income tax returns for the year 1971 the American Company and its telephone subsidiaries adopted for income tax purposes shorter depreciation lives than those used for book purposes for certain plant, as allowed in proposed income tax regulations of the Treasury Department. If the regulations become final in their proposed form without normalization, or normalization is not otherwise provided, and with respect to 1972 if the Company and its telephone subsidiaries adopt similar shorter-life provisions of the proposed regulations in filing income tax returns for the year 1972, net income would be increased for the years 1972 and 1971 by about $108,600,000, and $88,000,000 ($.20 and $.16 per share), respectively. There can be no assurance that such effect on net income will occur considering that departure from normalization of income taxes would be inconsistent with recent Congressional policy on like matters.

(e) **Other Income**—Includes principally the proportionate interest in earnings of companies, the investment in which is carried on the equity basis, of $294,135,000 in 1972 and $274,513,000 in 1971; interest charged construction of $208,718,000 in 1972 and $206,053,000 in 1971; less minority interests in net income of subsidiaries of $72,985,000 in 1972 and $63,421,000 in 1971.

(f) **Investments**—Investments at equity as of December 31, 1972, with dollars expressed in thousands, comprise:

			Equity			
Company	Percent Ownership	Market Value[2]	Shares at Cost[3]	Excess of Net Assets Over Cost	Advances	Total
Western Electric Company, Incorporated[1]	100.0	$ —	$1,326,001	$1,579,047	$ —	$2,905,048
The Southern New England Telephone Company	17.1	73,409	47,562	21,560	13,700	82,822
Bell Telephone Laboratories, Incorporated	50.0[4]	—	79,000	—	—	79,000
Cincinnati Bell, Incorporated	25.7	40,368	24,345	15,390	8,200	47,935
All Other	—	—	871	2,750	5	3,626
			$1,477,779	$1,618,747	$21,905	$3,118,431

[1] Total assets and liabilities of Western Electric Company, Incorporated and its Subsidiaries at December 31, 1972 were $4,309,899,000 and $1,404,851,000, respectively. Net income for 1972 was $282,941,000.

[2] Where applicable, based on N.Y. Stock Exchange closing price for 1972.

[3] The Uniform System of Accounts of the Federal Communications Commission requires that investments be carried on the books of the companies at cost. In accordance with generally accepted accounting principles, certain investments are included at equity in the accompanying balance sheets. See note (a), *Consolidation*.

[4] Western Electric Company, Incorporated, owns the other 50.0 per cent of Bell Telephone Laboratories, Incorporated.

Investments at cost include $57,915,000 ($185,328,000, based on 1972 year-end closing price on the N.Y. Stock Exchange) relating to Communications Satellite Corporation (Comsat). The Company owns 29% of the voting stock of Comsat and has representation on the Board of Directors. However, the equity method of accounting for this investment is not deemed appropriate because the Company is precluded from exercising significant influence over operating and financial policies of Comsat under terms of the enabling legislation establishing Comsat.

(g) **Cash and Temporary Cash Investments**—Cash and temporary cash investments have been reduced by the amount of drafts outstanding with a corresponding reduction in accounts payable. It is the practice of the Company and some telephone subsidiaries to make certain payments by draft and to record such drafts as accounts payable until such time as the banks honoring the drafts have presented them for payment. The Company maintains cash and temporary cash investments not only to meet its own obligations but to maintain funds upon which the subsidiary companies may draw on a day-to-day basis.

(h) **Convertible Preferred Shares**—Each $4 preferred share can be redeemed by the Company at a premium of $1 per $50 share commencing August 1, 1974 and at diminishing amounts thereafter, and is convertible into approximately 1.05 common shares of the Company. During 1972, 2,995 shares were converted into 3,153 common shares.

(i) **$77.50 Preferred Shares**—Such shares may be redeemed by the Company at a premium of $75.30 per $1,000 share before January 31, 1974 and at diminishing amounts thereafter. These shares are subject to systematic redemption without premium commencing February 1, 1978.

(j) **Common Shares**—In December 1972 the Company issued 4,396,092 common shares in connection with an exchange offer made to shareowners of the New England Telephone and Telegraph Company. The excess of the fair market value of the Company's shares over the book value of the New England shares tendered amounted to $37,367,000 and is reflected as a deferred charge on the consolidated balance sheets and will be amortized as a charge to net income on the consolidated income statements over a fifteen year period beginning in 1973.

At December 31, 1972 warrants were outstanding to purchase 31,337,622 common shares of the Company, at $52 per share, at any time through May 15, 1975. Warrants to purchase 5,315 shares were exercised during 1972.

(k) **Debt**—Interest rates and maturities on long and intermediate term debt outstanding at December 31, 1972, in millions of dollars, were as follows:

Maturities	2⅝% to 3⅞%	4% to 6⅞%	7% to 9⅜%	Total
1973-1979	$ 835	$1,125	$ 375	$ 2,335
1980-1989	2,480	583	75	3,138
1990-1999	642	3,497	450	4,589
2000-2012	—	4,612	9,469	14,081
	$3,957	$9,817	$10,369	$24,143

The above table includes $35 million 2¾% mortgage bonds due February 1, 1973 which have been refinanced and $150 million 3⅜% debentures due December 1, 1973, which will be refinanced.

Notes payable consist of borrowings from banks and commercial paper, due twelve months or less from date of issue. At December 31, 1972 the average rate of interest on these notes was 5.7%.

Since December 31, 1972 five subsidiaries have announced their intention to sell $1,075,000,000 of long and intermediate term debt. The proceeds of such sales will be applied toward repayment of debt and for general corporate purposes, including extensions, additions and improvements to plant.

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Board of Directors

1 John D. deButts
2 William L. Lindholm
3 Robert D. Lilley
4 Edward W. Carter
5 Catherine B. Cleary
6 William M. Batten
7 J. Victor Herd
8 William B. Murphy
9 Edward B. Hanify
10 Archie K. Davis
11 H. I. Romnes
12 Jerome H. Holland
13 Jay Taylor
14 Lloyd D. Brace
15 J. Irwin Miller
16 James R. Killian, Jr.
17 William J. McGill
18 Thomas F. Patton
19 William A. Hewitt

See following page for complete list of Officers and Directors, and Directors' affiliations.

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Exhibit 7M

8

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Exhibit 7M

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PRESIDENT
Robert D. Lilley

VICE CHAIRMAN OF THE BOARD
William L. Lindholm

EXECUTIVE VICE PRESIDENT
Cornelius W. Owens

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F. Mark Garlinghouse
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VICE PRESIDENT AND COMPTROLLER
Alexander L. Stott

VICE PRESIDENT AND TREASURER
John J. Scanlon

SECRETARY
Frank A. Hutson, Jr.

Board of Directors

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Chairman of the Board, J. C. Penney Company

Lloyd D. Brace
Former Chairman of the Board, The First National Bank of Boston

Edward W. Carter
Chairman of the Board, Broadway-Hale Stores, Inc

Catherine B. Cleary
President, First Wisconsin Trust Company

Archie K. Davis
Chairman of the Board, Wachovia Bank and Trust Company, N.A.

John D. deButts
Chairman of the Board

Edward B. Hanify
Partner, Ropes & Gray

J. Victor Herd
Director and Member of Executive Committee, The Continental Corporation

William A. Hewitt
Chairman, Deere & Company

Jerome H. Holland
Management Consultant

James R. Killian, Jr.
Honorary Chairman of the Corporation, Massachusetts Institute of Technology

Robert D. Lilley
President

William L. Lindholm
Vice Chairman of the Board

William J. McGill
President, Columbia University

J. Irwin Miller
Chairman of the Board, Cummins Engine Company, Inc.

William B. Murphy
Former President, Campbell Soup Company

Thomas F. Patton
Honorary Chairman of the Board, Republic Steel Corporation

H. I. Romnes
Former Chairman of the Board and President of the Company

Jay Taylor
Owner, Jay Taylor Cattle Company

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Exhibit 7M

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AT&T

American Telephone and Telegraph Company
195 Broadway, New York, N.Y. 10007

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EXHIBIT 8A
April 28, 1961 letter from H.L. Kertz
to General Commercial Managers

Centrex Service (In-Out Dialing for Business Customers) - Rate Principles and Illustrative Rate Treatment

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK 7, N.Y.

AREA CODE 212
EX 3-9800

H. L. KERTZ
ASSISTANT VICE PRESIDENT

April 28, 1961

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
8A

Working with a Task Committee of Associated Company rate heads and with representatives of the interested Operations, Engineering and Marketing Divisions here, we have undertaken to develop basic principles and procedures which it would seem feasible for all Companies to follow in establishing rate treatment for Centrex Service.

The conclusions reached are summarized in the attached notes. In addition, a comprehensive binder has been prepared for the use of Rate people, discussing in detail the application of the principles to the development of specific rates. The material in that binder is directly keyed to a booklet which Mr. Ostergren sent to Chief Engineers on March 24 outlining a method of developing cost data for Centrex Service. At our request, he included a copy for you. You have also been sent a copy of Mr. Landry's letter of March 28, 1961 which reviews the status of the Centrex Marketing program.

As you know, Centrex Service is a fully-mechanized PBX-type service which, in addition to the conventional features, provides direct inward dialing to PBX stations and station identification on all outward toll calls. It can be furnished through conventional dial PBX facilities located on the customer's premises, with appropriate equipment provisions in the serving central office or a convenient tandem office. It can also be furnished through central office switching facilities located on Telephone Company premises. (Mr. Mapes' letter of September 20, 1960, copies of which were sent to General Commercial Managers, describes this latter method in detail as it applies to No. 5 crossbar offices.)

There are several fundamentals which it is generally agreed are of utmost importance in establishing the rate basis for the large scale development of this service.

1. Maximum economic utilization should be made of the very large investments all Companies now have in dial PBX equipment.

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Exhibit 8A

For the System, upwards of $600 million is now invested in PBX equipment, much of it dial.

2. Policies, practices and rate treatment should be designed to keep control of the choice of serving method in the hands of the Telephone Companies to the maximum extent possible.

3. In order to accomplish these objectives - which are in the public interest as well as that of the business - a single Centrex offering should be visualized which will be treated essentially the same for rate purposes regardless of the type of facilities used or their location.

    This approach is entirely appropriate, since the basic service features which the customer receives are essentially the same under either serving arrangement, even though in some respects he secures them in different ways.

The rate approach proposed assumes that these objectives will be attained. On this basis it is possible to contemplate somewhat lower rate levels than could otherwise be safely established. Such lower levels can be expected to permit greater development of the service. This is desirable not only from the standpoint of service to customers but also the gains in efficiency we can realize through increased mechanization of this important segment of our traffic.

Obviously, the realization of such fundamental objectives requires that all departments concerned do their jobs in a manner fully consistent with the principles involved. Especially, it assumes that Marketing will be able to sell the service generally without regard to the way it is furnished and, therefore, that Engineering and Traffic will be free to determine the serving method in each situation on the basis of relevant economic and service considerations, rather than have this dictated by other considerations or circumstances.

Uniformity of rate approach among the Companies would seem to be of unusual importance in the Centrex offering, since it promises quickly to become a "standard" service for our larger customers who have branch organizations scattered across the country. Each Company, of course, will want to consider its own requirements, with due thought to relationships with existing offerings. However, discussion of the proposed principles and procedures with practically all of the Companies would indicate that very similar rate treatment is entirely feasible and should be achieved.

This is a fairly complicated subject and we are anxious to help in any way we can. Tom Davis (212 - EX 3-3992) and Dick Wilson (212 - EX 3-4238) have been specializing on this and will be glad to discuss any aspect about which there are questions.

At the requests of Messrs. Landry, Mapes and Collins, copies of this letter are being included for Marketing people, Chief Engineers and General

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Exhibit 8A

Traffic Managers. Also, in view of their interest in the matter during our recent Operating Conference discussions, I am sending copies to the Operating and Marketing Vice Presidents.

There are some refinements and auxiliary features of the offering which are still in the process of development. As these become settled we will write you further.

Very truly yours,

H L Kertz

Assistant Vice President

Attachment
  Notes
  Rate Development Binder
    (to special mailing list)

To all General Commercial Managers
  (Copies included for Marketing people,
    Chief Engineers and General Traffic
    Managers)

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
8B

E1C5
EXHIBIT 8B
Notes accompanying April 28, 1961
H.L. Kertz letter

CENTREX SERVICE

Notes on Rate Principles and Illustrative Rate Treatment

(Accompanying letter dated April 28, 1961)

The following summarizes basic rate principles and procedures recommended for System adoption by a Task Committee of Associated Company Rate Heads working in conjunction with A. T. & T. Operations, Engineering and Marketing people.

> Detailed material on this subject has been prepared for the use of Rate people in developing specific schedules.

An example of a rate structure incorporating these principles is included. This should be looked upon as illustrative only, since each Company's rate levels will necessarily reflect its own cost and other conditions. However, uniform application of the principles and methods can be expected to result in schedules sufficiently alike to seem reasonable to customers having requirement for the service in a number of Companies.

Basic Concept of Centrex Service

The concept of Centrex service underlying the rate proposals includes both general methods of furnishing in-out dialing to PBX customers, namely through the equivalent of conventional dial PBX systems located on customers' premises or through centralized dial systems located on Telephone Company premises.

> In these notes, "Centrex-CU" is used to indicate that the switching equipment is on customer premises and "Centrex-CO" indicates Company premises or central office. (These are purely internal working terms.)

The objectives of all departments can best be served if "Centrex" is treated as a single all-inclusive service, rather than limiting it to centralized dial systems located on Telephone Company premises.

> Means are available to furnish the essential basic features of this offering to all customers in dial central offices.
>
> The revenue-producing value of much existing dial PBX equipment can thereby be preserved.
>
> The rate structure can minimize the effect of differences of serving method and give the Companies greater latitude to base the choice of equipment arrangements on economic considerations.

Service Features Included in Offering

The basic Centrex service offering, as now visualized, contains the following features, whether furnished on a "CU" or "CO" basis:

- Equivalent of conventional PBX service

PLUS

- Direct in-dialing to stations.
- Station identification on outward toll traffic.
- Transfer of incoming calls from one station to another.
- Intercept - machine or attendant.
- Night connections.

Taken together, these features provide in Centrex service a very near equivalent to individual line business service, as shown in Attachment 1.

Rate Objectives

The principal rate objectives are:

- Provide a reasonable return on investment, giving due recognition to the added plant as well as continued use of existing dial PBX equipment.
- Promote high development - Centrex ultimately for all PBX customers.
- Be competitive.
- Foster Systemwide uniformity of rate approach within all practicable limits.
    - Must, of course, consider existing filed tariffs, existing customer commitments, Commission attitudes, etc.
- Centrex rates should be related to basic exchange and conventional PBX rates.

Rate "Packaging"

The rate proposals contemplate completely packaging into the station rate the facilities and equipment (including stations and trunks, but not attendants' positions) required for the basic Centrex service. It is proposed that all Companies work toward this packaging objective, even though it might not be feasible for them to fully accomplish this initially.

> "Package" rates are easily understood by customers and simplify rate administration. Furthermore, it is sound to develop a package station rate since a customer's overall communication requirements are initially reflected in stations. Also, in the case of Centrex-CO, there is no alternative: trunks, selectors, connectors, power and other dial PBX items charged for separately in the past do not exist as identifiable items dedicated to a single customer's use.

It is contemplated that features of a more specialized nature outside the basic Centrex offering will be priced separately.

The "packaged" and optional features are listed in Attachment 2.

Revenue Requirements

Revenue requirement studies have been made by A. T. & T. Engineering Economics people based on a wide variety of cases, and reflecting average System costs.

A booklet detailing a method of developing cost data which can be useful in the preparation of individual Company cost studies has been sent to Chief Engineers, along with an extra copy for their Commercial coordinates.

In general, the revenue requirements per station are high for small systems and diminish as the size of the system increases until about 1800 main stations are reached. Beyond this point the per-station requirement tends to level off. Analysis of the smaller systems indicated that, under present conditions, about 300 main stations appear to be the minimum size system which could generally be served without raising the whole rate structure to unsalable levels. Although these characteristics apply equally to Centrex-CU and Centrex-CO, the Centrex-CO revenue requirement levels are generally higher than those of Centrex-CU.

> The higher Centrex-CO costs are largely the result of having a separate pair of wires from the central office to the customer's premises for each Centrex line, as against the sharing of a trunk pair by a number of Centrex-CU line users.

Other Economic Aspects

The medium and large PBX's (those having several hundred or more stations), who are the prime prospects for Centrex service, originate and receive substantial volumes of toll calls. Much of this toll traffic is placed or received on a person-to-person or time and charge basis. Experience with existing Centrex-type installations, although limited in number, indicates a shift from operator-handled toll traffic to a greater use of DDD service by these PBX users. The resultant traffic operating savings, although offset by a reduction in toll revenues, may be significant especially in metropolitan areas where most prospective Centrex users are located.

Also, it is possible that further savings will be realized from Centrex service in local and toll plant through reduced holding times resulting from calls bypassing the PBX attendant.

Some time will be involved in realizing the effect of these savings. To the extent that these factors can be developed in any particular situation, assistance in evaluating them can be provided.

Rate Treatment

A recommended method for the determination of Centrex rates has been developed. Because of the different conditions involved in each state, it is impracticable to contemplate a single rate schedule for Systemwide application and none is proposed. For example:

E108
Exhibit 8B

Charges for conventional PBX service vary widely.

Basic exchange rate schedules are quite different, both in structure and rate levels. The relationship of these services to the quite comparable Centrex service must necessarily be considered.

Mix of central office equipment differs and, therefore, revenue requirements differ.

Proportion of Centrex-CU and Centrex-CO installations will vary.

The following rate schedule illustrates the application of the proposed method, using a particular Company's central office "mix" and assumed Centrex development. It is based on average System revenue requirements.

CENTREX SERVICE

EXAMPLE OF PROPOSED RATE TREATMENT

Per Main Station Per Month

		Switching Equipment Located on:				
		Customer Premises				Company Premises
Group	Telephones in Local Service Area	First 50	Next 250	Next 600	Over 900	Added Charge
Centrex Schedule I	Less than 67,000	$ 9.50	$ 9.00	$7.00	$4.50	$0.25
Centrex Schedule II	67,000 to 374,999	10.75	10.25	7.75	5.00	0.35
Centrex Schedule III	Message Rate Met. Area	8.00	7.00	5.75	4.00	0.50

Notes: 1. All Centrex Schedules - Minimum charge is for 300 main stations at any one location for the same customer.

2. Centrex Schedule III - No message allowance included.

This schedule reflects the following principles which are basic to the method proposed:

A single composite rate regardless of serving method (Centrex-CU or Centrex-CO) with only a slightly higher charge for Centrex-CO to reflect the value of floor space and power provided by the Company.

Reflects the value-of-service principle of exchange rate bands by establishing three Centrex rate schedules to recognize differences in station availability. Also, maintains distinction between flat and message rate exchanges.

Considers the probable statewide mix of central office equipment used to furnish Centrex service that might reasonably be expected to obtain within a relatively short period of time of about five years. Also, reflects the proportion of Centrex-CU and Centrex-CO installations anticipated.

Existing trunk revenues were used and allocated to each station. Such allowances were considered to cover adequately the normal incoming and outgoing central office and associated outside plant costs for trunks.

"Package" rate covers all equipment and facilities (telephones, trunks, switching equipment, etc., but not the attendants' positions) for a complete service with in-dialing, extension identification, intercept, transfer, night connections, and the automatic call distributing arrangement for associated attendants' positions. Service would be furnished at the above charges anywhere within the base rate area established for primary exchange service (but not beyond the boundaries of the serving central office district).

Engineering and Traffic people are given maximum latitude in determining the most appropriate serving method and are in a position to insure that adequate quantities of facilities are furnished to insure good customer service uninfluenced by charge considerations.

In line with pricing philosophy of business generally, there is a lower price for volume purchases consistent with declining revenue requirements as the size of installation increases.

Continuing this same example, other basic items would be charged for as follows:

Attendants' Arrangements:

These could consist of either console-type equipment or the 608A cord switchboard.

A uniform charge of $125 per month per position for either the console or the 608A switchboard would be contemplated. The type to be provided in a given case would be determined primarily on the basis of service considerations, including the number of tie and foreign exchange lines having to be accommodated.

Bridged Extension Telephones:

Rates would reflect revenue requirements for the station and associated wiring, plus an incremental amount to cover the added call load on switching equipment and trunks resulting from the additional station on the same line, Value-of-service principles would be recognized by having a differential between flat and message rate exchanges.

E110
Exhibit 8B

In the example above, this would result in the following monthly rates:

Schedules I and II (Flat Rate)..........	$3.00 each
Schedule III (Message Rate).............	2.75 each

Fully-Restricted Telephones:

These are stations restricted entirely to intercommunication. Based on revenue requirements for the station, switching and associated facilities, a charge of $3.50 per month would be appropriate.

Tariff Considerations

Generally, it would seem that specific tariffs would be filed for Centrex service, entirely separate and distinct from existing PBX tariffs.

In line with the principle of a single Centrex offering, with the Company generally determining the serving method, the tariff would describe the basic offering in terms of the service features, rather than the instrumentalities used. Moreover, it would desirably condition the offering upon the availability of facilities and specifically reserve to the Company the right to determine where each type of Centrex service (CU or CO) will be offered.

In the relatively few states where tariffs have previously been filed for "in-dialing" service appliqued on existing PBX offerings or for a restricted offering of Centrex-type service, it would seem desirable to obsolete the existing tariff if feasible or otherwise take steps which will, as rapidly as possible, get all customers on the proposed rate basis.

Other Rate Treatment

Rounding out the basic rate package also involved the development of appropriate treatments for service connection and change charges, termination contracts, certified military installations, situations where a customer requires service at more than one location, etc. These matters and our rate suggestions are discussed in detail in the binder being sent to the Rate people.

E111
Exhibit 8B

Attachment 1

COMPARISON OF SERVICE ARRANGEMENTS FOR INDIVIDUAL LINE, CENTREX-CU AND CENTREX-CO

SERVICE ARRANGEMENTS	INDIVIDUAL LINES	CENTREX-CU	CENTREX-CO*
Pair to Central Office for	Each Individual Line	Each Centrex Trunk	Each Centrex Main* Station
Directory Number Listed Free for	Each Individual Line	Each Centrex System	Each Centrex System
Directory Listing Possible for	Each Individual Line	Each Centrex Main Station	Each Centrex Main Station
Incoming Calls Are Completed	Directly to the Individual Line	Directly to the Centrex Telephone or By Centrex Attendant	Directly to the Centrex Telephone or By Centrex Attendant
Outgoing Toll Calls Are Dialed By: - Charged to	Individual Line User: Directory Number	Centrex Telephone User: Centrex Main Station Number	Centrex Telephone User: Centrex Main Station Number
Intra-Premises Calls Switched By	Central Office Equipment	SxS-Type PBX Dial Equipment	Central Office* Equipment
Transfer	None	By Centrex Attendant	By Centrex Attendant

* For SxS Centrex-CO, the centralized SxS equipment is similar to a central office from an incoming trunking standpoint and to a conventional PBX from an outgoing trunking standpoint.

E112
Exhibit 8B

Attachment 2

SERVICE FEATURES

SERVICE FEATURES BASIC TO CENTREX OFFERING	OPTIONAL FEATURES
Basic PBX Service	*Tie Lines - Dial
Direct In-Dialing	- Manual
Station Identification	- 2-way with Line Appearance
- Out-Dialing - CAMA Operator	Auxiliary Consoles
- ANI	Add-on
- Toll Operator	Foreign Exchange
Station Transfer	Conference Circuit
Split-Talk Forward on Incoming Call	Toll Restriction
Intercept - Machine	Busy Verification by Attendant
- Attendant	Connection to Customer's Paging System
Night Connections	Single Push-button Completion
608A Cord Board or Console	Four or Five Digit Inter-Customer Dialing (for airports)
- Switched Loop Operation	Dictation Recording Trunks
- Two-way Attendant Operation	
- Attendant Can Hold Any Call	
- Ring Back to Ext. While Held	
Restricted Stations	
Hunting Groups	

Note:

All service features are not available with all equipment arrangements. Check Engineering and Traffic coordinates before quoting features to a customer.

* Tie lines between locations of the same customer in the same central office district within the base rate area are included in the basic features.

E113
EXHIBIT 8C
Binder, "Centrex Service Rate
Development Considerations"

CENTREX SERVICE

RATE DEVELOPMENT CONSIDERATIONS

APRIL 1961

USA 33a - 475
(ED. 4-23-71)

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DEFINITIONS

For purposes of common understanding of the material to follow, it will be necessary to use several terms which have different meanings in the various Operating Companies. This memorandum will use the following definitions:

Satellite Location: A second (and third, etc.) location for a given customer, at which switching equipment is located which is connected to the main location by tie lines and does not have an attendant at that location to handle incoming listed number traffic.

Connected Systems: Interconnected customer locations each having an attendant.

Multi-Location Customer: A customer having stations connected to his Centrex system, on two or more premises. A multi-location customer might have satellites, off-premises extensions and/or connected systems.

Unrestricted Station: A fully-mechanized station having full in-out dialing privileges.

Fully-Restricted Station: A station having direct intra-organization dialing privileges only.

These stations have no possibility of completing calls through the attendant's position.

Partially-Restricted Station: A station having any arrangement between fully-restricted and unrestricted stations.

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CENTREX SERVICE

(In-Out Dialing for Business Customers)

Proposed Rate Approach and Related
Marketing and Engineering Implications

This memorandum covers in some detail the results of extensive study of the rate aspects of In-Out Dialing for business customers. It takes into account both of the methods of furnishing such service, namely through conventional dial PBX systems located on customers' premises and through centralized systems located on Telephone Company premises.

> The rate proposals made herein have been evolved by the Rate Section in collaboration with a committee of Associated Company representatives of department level (largely the rate heads of their respective Companies). A.T.& T. members of this working team have included Marketing, Systems Planning and Engineering Economics people.

The conclusions dealt with here have implications well beyond specific rate matters. It has become increasingly evident during the studies that the character and extent of the marketing program carried on in connection with this service - and the kind of outside competition to be expected in the PBX field - will have a great bearing on the type of rate structure and level of rates which can be contemplated. In turn, the rate conclusions reached have important implications from an engineering standpoint, both with respect to economic utilization of existing large investments in conventional PBX facilities and in the management of programs designed to substitute centralized facilities for customer-premises installations.

Basic Elements of the Service

What we are dealing with here is a fully-mechanized PBX-type service which, in addition to the conventional features (completion of in and out calls through an attendant, direct dialing of outward calls where desired, transfer and intercommunication) has the following new service features:

1. Direct inward dialing to PBX stations (7 digit basis).
2. Station identification on all outward toll calls.

   This is a necessary prerequisite to securing unlimited direct dialing of outward calls by extension users, which

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is within the capability of many existing dial PBX's but rarely permitted by customers because of their inability to control usage by employees or allocate charges by organization units.

Where these features are furnished through centralized facilities on Telephone Company premises, there is a further additional feature over and above conventional offerings, namely:

3. Floor space (and housekeeping) and power.

While the features are simple in concept and generally comparable in broad result, their accomplishment runs the gamut of difficulty from quite easy and cheap to do (some cases of PBX's served by SxS central offices) to quite complicated and expensive situations.

The station identification feature contributes its own particular share of problems and variety. Automatic number identification (the most desirable form from a customer standpoint) is currently feasible economically only where PBX service features are furnished through centralized #5 X-bar equipment set up to function on a central office basis (i.e., extensions terminated basically as individual line services are terminated).

In most situations the less desirable CAMA method must be offered pending development of some economical means for furnishing ANI through SxS-type PBX facilities. This urgently-needed development is being investigated by the Laboratories but it is doubtful if it can be made widely available much before 1964-1965, as matters now stand.

In quite a number of communities (including Los Angeles) there is currently no CAMA. Station identification can only be provided by having calls handled manually by the toll operator who would record the extension number on the toll ticket for billing purposes. (In the case of a large city like Los Angeles this might involve special problems.)

These subjects will be discussed in more detail later on, as cost and other aspects are taken up.

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A Proposed Way of Looking at the Offering

As will be developed later, despite the differences just mentioned there are compelling reasons for visualizing this as a single composite service offering, carrying the same basic level of charge regardless of variations in the type of facilities that happen to be used or in the way the features are provided (e.g., as between CAMA identification and ANI).

Some of the broad reasons for this approach are -

> We have very large investments (probably as much as $600 million) in existing PBX equipment, much of it dial. It is in the interest of the telephone-using public as well as our business that the revenue-producing value of these investments be preserved.
>
> Similarly, we have large investments in central office facilities of a variety of types. Equipment arrangements will permit furnishing the essential basic features of this offering so as to insure the best utilization of all these facilities during their useful life.
>
> Under these circumstances and recognizing that value-of-service considerations dictate about the same rate level for the service regardless of how it is furnished, it could be very unwise to promote any idea of differences which would encourage customers to "pick and choose", quite possibly to our economic detriment in a significant number of cases. Desirably, we should endeavor to keep ourselves as free as possible to determine the serving method in all cases.

This approach is entirely consistent with our basic exchange service offerings. In most states, these are furnished under statewide schedules and the same charges apply (for exchanges of a similar size) regardless of whether the service is provided through a manual or a dial central office and, in the case of dial, whether DDD is available or not.

> This has also applied generally to other details of exchange service, e.g., presence or absence of selective ringing on party lines, the particular type of station equipment furnished, etc.

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By adopting this approach - i.e., having basically a single composite offering and retaining freedom generally to determine the serving method - we can justify a lower rate for this offering. It will be shown that even at this level, the penetration of the market may be considerably less than is ultimately desirable, considering the possible benefits to both customers and the Company from the standpoint of faster service and more economical operation.

Considering all these circumstances, it seems evident that we should look upon this offering, regardless of how it is provided, as the same basic service. Essentially, it consists of the furnishing of central office-type service to extension users of business organizations, along with the intra-organization communication inherent in conventional PBX service. The central office-type features set it distinctly apart from PBX service and warrant distinctive rate treatment and terminology.

As to terminology, the name "CENTREX" would seem a most apt one for the basic service (instead of only for the centralized types of #5 X-bar and SxS equipment - as originally contemplated).

> For internal use at least, some distinction is needed between service furnished through facilities on customer premises and that furnished through centralized facilities. This might be done by a distinguishing code designation, as for example - "CENTREX-CU" (for customer premises) and "CENTREX-CO" (for company premises or central office).

For want of better terms, these will be used in this memorandum.

Broad Rate Objectives

Explicit in the rate treatments proposed herein are a number of broad rate objectives. It may be helpful to review the principal ones at this point.

1. Promote high development.

   The potential customer and company benefits are large. The more development we have, the more we gain.

   Centrex should not be looked upon as a luxury service to be enjoyed by a relatively small number of large customers. It is to be hoped that ultimately it will become the standard service for business customers in what is now the PBX market.

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2. Yield going rate of return.

In the aggregate, the new service features should pay their own way. It appears that although costs are substantial, value-of-service is high. This is particularly so in the case of medium to large systems, where the customer can realize substantial dollar savings in operator and switchboard expense, in addition to the service advantages.

3. Make some improvement in earnings on basic PBX facilities.

Though overall earnings from services furnished PBX customers have in most Companies been at satisfactory levels, rates for some basic items (particularly switchboard positions and dial equipment) have not generally kept pace with current day cost. Therefore, it seems desirable that in establishing rates for Centrex service, it be the objective to put all of the basic components of the service on a fully compensatory basis. However, this must necessarily be done with good judgement: in some cases the gap is too large to try to close in one jump; also we must generally lift all rates (Centrex and PBX) together, because if we concentrate our earnings improvement efforts on Centrex only we will have so large an increase over PBX rates that customers may not be willing to buy.

4. Protect the individual business line rate structure.

With Centrex service (CU and CO, both), service features available to station users become very much the same as those furnished on individual business line service. (See statement of comparative service arrangements in Attachment 1 of this section).

Individual line business rates (typically $10 - $20 per month for flat rate service) are in many places well above rate levels that could be considered marketable for Centrex station users. There is cost basis and rationale for a somewhat lower Centrex rate, but there are limits below which we probably can not go without seriously compromising our basic schedules.

5. Remain competitive with privately-owned systems.

By no means do all station users of a PBX system have requirement (from the employer's point of view) for outside

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communication. There are many concerns where the majority of users are in this class.

Our present rate structures recognize this by offering restricted stations of various types (including stations totally restricted to interior use) and also bridged stations. The rates generally are significantly lower than for primary stations.

If we are to avoid encouraging customers to put in private systems to serve such station users, we will have to continue to offer restricted and bridged stations at attractive rentals.

6. Establish schedules on a statewide basis.

As mentioned earlier, costs for Centrex service vary widely. If rates were based on the individual costs involved they could be unattractive to customers in some cases and not too much above conventional PBX rates in others. But the value of service remains essentially the same.

It is consistent with rate practices for basic exchange services to price Centrex service on a statewide basis, with a modest amount of "banding" to recognize variations in station availability.

7. Try to "lock in" schedules with basic exchange rates.

It is important to contemplate some mechanism for keeping Centrex rates keyed in with those of basic exchange services as rate cases and other rate activities materialize in the future. One promising possibility would be to file Centrex rates with the basic exchange rate schedules in the Companies' tariffs.

8. Do as much rate "packaging" as possible.

Promotionally, there are important reasons for packaging all of the basic features into a single rate - and one that would look about the same whether Centrex-CU or Centrex-CO is furnished.

It should be recognized that the effect of comprehensive packaging is to "average" rates; in this case packaged on a per station basis. Such averaging on the basis of number of service "outlets" does not reflect variations in use of the service, i.e., station call rates, any more than do our rates for individual line service. The result

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of such a practice tends to be a somewhat better bargain for the customer requiring high call-carrying capacity. In the case of Centrex service, it is likely to mean that some low station-call-rate customers will not find the service economically attractive.

There are additional rate considerations and objectives of a more detailed character that will be taken up as the later subjects are covered.

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Attachment 1

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COMPARISON OF SERVICE ARRANGEMENTS FOR INDIVIDUAL LINE, CENTREX-CU AND CENTREX-CO

SERVICE ARRANGEMENTS	INDIVIDUAL LINES	CENTREX-CU	CENTREX-CO*
Pair to Central Office for	Each Individual Line	Each Centrex Trunk	Each Centrex Main* Station
Directory Number Listed Free for	Each Individual Line	Each Centrex System	Each Centrex System
Directory Listing Possible for	Each Individual Line	Each Centrex Main Station	Each Centrex Main Station
Incoming Calls Are Completed	Directly to the Individual Line	Directly to the Centrex Telephone or By Centrex Attendant	Directly to the Centrex Telephone or By Centrex Attendant
Outgoing Toll Calls Are Dialed By: - Charged to	Individual Line User: Directory Number	Centrex Telephone User: Centrex Main Station Number	Centrex Telephone User: Centrex Main Station Number
Intra-Premises Calls Switched By	Central Office Equipment	SxS-Type PBX Dial Equipment	Central Office* Equipment
Transfer	None	By Centrex Attendant	By Centrex Attendant

---

* For SxS Centrex-CO, the centralized SxS equipment is similar to a central office from an incoming trunking standpoint and to a conventional PBX from an outgoing trunking standpoint.

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SECTION II

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DESCRIPTION OF OFFERING

Although it is visualized that the basic service to be offered to the public will be called "Centrex," for general internal purposes and in this memorandum the terms Centrex-CU and Centrex-CO will be used. The two versions of Centrex will ultimately provide customers with identical services. The Centrex-CU and Centrex-CO offerings can be briefly described as follows:

Centrex-CU

Will perform all of the basic services available with conventional dial PBX's.

> Feature availability should be checked with your engineering people since some features are currently under development.

Direct inward dialing is also provided as well as the identification of the calling station line on outward calls.

> Outgoing toll calls will be identified and billed by 7 digit station numbers. Since automatic identification of the calling station line (ANI) is not yet available for Centrex-CU service, the station number must be passed verbally to a Telephone Company operator.
>
> Code billing (using "QZ" codes) can be provided in lieu of, or in addition to, station number billing. Established tariff rates for this service (see A.T.& T. letter, C.L. 1476, December 29, 1959) would be applicable.

Switching equipment, as with conventional dial PBX's, will be located on the customers' premises.

> This means that the customer will supply power to operate the equipment. It will also permit combining of Centrex and conventional PBX operations for the same customer without the need for tie lines, since the two services would be served from the same equipment installation. Complete Centrex service desirably should, however, be sold whenever possible.

Although some optional features will carry specific charges, it is proposed that the station transfer, intercept, and night connection features be included as part of the basic Centrex package.

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> The customer will have a choice of machine intercept or attendant intercept. The former will be provided without charge supervision. With attendant intercept, however, the ability to pass intelligence between the attendant and the calling party makes it necessary to apply charge supervision. The Traffic department should recommend the method of intercept to be used.

Centrex-CU service will normally use SxS-type PBX equipment on the customers premises, working through SxS central offices; X-bar tandem; X-bar tandem in combination with Panel, #5 X-bar or #1 X-bar; or the new #5 X-bar with tandem features. There are other possibilities for the future involving X-bar or electronic PBX systems on customer premises and also Electronic Central Offices.

Centrex-CO

This offering is very similar (almost identical in fundamental service features) to the Centrex-CU. The principal differences are:

> The calling station will be identified automatically in the case of the #5 X-bar; there will be no need for the station user to pass his 7 digit number verbally.
>
> > At the present time Centrex-CO service is being provided only through #5 X-bar equipment. Present indications are that ANI will not be available by the time Centrex-CO through centralized SxS-type PBX equipment becomes a reality.
>
> All switching equipment will be located on Telephone Company premises (central office building or space rented by the Telephone Company).

Although they have not all been enumerated, the similarities beween Centrex-CU and Centrex-CO (considering also features common to conventional PBX's) far outweigh the differences. Every effort is made in the rate structure which follows to make the two seem as much alike as possible so that customers to whom it is not economically feasible to offer Centrex-CO will readily accept in-dialing by Centrex-CU.

Attachment 1 summarizes the principal features available with Centrex service.

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SECTION II
Attachment 1

SERVICE FEATURES

SERVICE FEATURES BASIC TO CENTREX OFFERING	OPTIONAL FEATURES
Basic PBX Service	*Tie Lines - Dial
Direct In-Dialing	- Manual
Station Identification	- 2-way with Line Appearance
- Out-Dialing - CAMA Operator	Auxiliary Consoles
- ANI	Add-on
- Toll Operator	Foreign Exchange
Station Transfer	Conference Circuit
Split-Talk Forward on Incoming Call	Toll Restriction
Intercept - Machine	Busy Verification by Attendant
- Attendant	Connection to Customer's Paging System
Night Connections	Single Push-button Completion
608A Cord Board or Console	Four or Five Digit Inter-Customer Dialing (for airports)
- Switched Loop Operation	Dictation Recording Trunks
- Two-way Attendant Operation	
- Attendant Can Hold Any Call	
- Ring Back to Ext. While Held	
Restricted Stations	
Hunting Groups	

Note:

All service features are not available with all equipment arrangements. Check Engineering and Traffic coordinates before quoting features to a customer.

* Tie lines between locations of the same customer in the same central office district within the base rate area are included in the basic features.

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SECTION III

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REVENUE REQUIREMENTS

General

The costs and revenue requirements for Centrex service are quite likely to be widely different for each installation.

> Variations result from the size of PBX, traffic characteristics, type of serving central office, size of local service area, code requirements, effect on outside plant, number and distribution of Centrex customers in local service area, availability of CAMA or ANI, etc.

For revenue requirements purposes it appeared impractical to express an average of the many variable situations. Therefore, certain cases were selected for study which were considered suitable to reflect the range of operations most likely to be encountered. Costs and carrying charges were developed for installations of 300, 600, and 1800 lines involving the following conditions:

1. Separate consideration of high and low usage customers.
2. Centrex-CU served from X-bar tandem, SxS, new #5 X-bar or common control central offices (panel, #1 X-bar and #5 X-bar - present) in conjunction with X-bar tandem.
3. Centrex-CO through #5 X-bar including outside plant.
4. Centrex-CO using SxS-type PBX served from X-bar tandem, SxS, new #5 X-bar or common control central offices in conjunction with X-bar tandem.

For the price-out it was assumed that the offering would provide the following service package:

1. Direct inward dialing to Centrex telephones standard 7 digit number.
2. Outward dialing by Centrex telephones with Centrex main station number identification.

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CAMA operator for Centrex-CU and Centrex-CO using SxS-type PBX.
AMA for Centrex-CO by #5 X-bar.
Costs for PBX ANI were estimated separately.

3. Transfer of incoming calls.
4. Vacant number intercept.
5. Night connection arrangements.

Costs were developed on a fully allocated rather than incremental basis recognizing that use of spare facilities for Centrex service advances subsequent central office relief.

Centrex-CU

Service furnished in this manner requires modifications and/or additions at both the central office and PBX and in certain cases will result in additional costs for outside plant and the Centrex main station identification feature.

The facility components required were considered on the following basis:

PBX Switching Equipment

Added switching equipment (selectors, connectors, etc.) is required for the completion of in-dialed calls previously completed by the PBX attendant. The pricing was based on Traffic Orders for a number of typical cases assuming 80% direct in-dialing to extension numbers.

Central Office Equipment

The change in CCS's in the serving central office (reflecting effects in the tandem center where applicable) times the average cost per CCS were separately developed for each type of central office situation.

In Panel and X-bar central office areas some traffic is removed from the local office and added to tandem.

In SxS central offices 5th selectors and connectors are vacated and PBX trunks are run off 4th selectors, sharing the central office code in many cases.

> In the future, #5 X-bar systems will be arranged to receive and pass calls without using the tandem features and will also be set up so that an office code can be shared by a number of PBX's.

Outside Plant

Introduction of Centrex-CU will usually result in an increase in outside plant investment over standard PBX service. In general, more trunks are provided when separate trunk groups are needed for each 1000 terminal group and because of splitting incoming and outgoing traffic. Also, average length of haul is usually somewhat longer because a larger proportion of traffic is routed via tandem.

The costs included for revenue requirement purposes were based on traffic distributions recognizing changes in the number of trunks, average length of haul and cost per mile.

Land and Buildings

In general, the space in central offices dedicated to Centrex-CU will be somewhat less than for standard PBX service.

> In the SxS central offices the end portion of the incoming switching train is moved out to the customers' premises. Also, with tandem there is a reduction in CCS load switched through the serving central office with a corresponding reduction in space. These savings help offset the cost of furnishing Centrex-CU service in the study.

Transfer

All cases in the study have provision for transfer of incoming calls by switchhook supervision through the PBX attendant.

Vacant Number Intercept

A #7A recorded announcement system is included in each case.

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Vacated Central Office Equipment

It is recognized that establishing Centrex-CU results in the vacating of local C.O.E. investment that might never be reused or remain idle for a considerable time. The study assumed that, *on the average*, it would take about 6 years to *fully* reuse the vacated equipment.

Each Company, of course, should consider the conditions in its territory in developing the appropriate reuse period.

Station Identification

Costs assume that CAMA operator identification is available at the home tandem.

So far only preliminary steps have been taken to develop automatic number identification for PBX use. However, an estimate has been made of the broad future revenue requirements that might reasonably be anticipated based on early Laboratories' estimates.

Summary, Centrex-CU Revenue Requirements

Includes costs to furnish:

1. Telephone set including station wiring and house cable.
2. PBX switching equipment - intercommunication and in-dialing additions.
3. Central office arrangements - represents net for Centrex.
4. Outside Plant - represents excess for Centrex.
5. Land and Buildings - represents net for Centrex.
6. Transfer.
7. Vacant Number Intercept.
8. Night Connections.
9. Station Identification by CAMA operator at "home" tandem.

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Excludes costs for:

1. PBX attendants' positions and automatic call distribution equipment.
2. Central office and line facilities for exchange trunks covered by filed tariffs.

Centrex-CU Revenue Requirements

	Per Main Station Per Month		
	High CCS System		
Serving Central Office	300 M.S.	600 M.S.	1800 M.S.
Step-by-Step	$3.95	$3.75	$3.40
Future #5 X-Bar	5.05	4.60	3.85
Common Control	5.45	4.95	4.10
Additional for PBX (SxS) ANI (when developed)	0.75	0.30	0.15

Notes:

1. Revenue requirements are based on the current average System experience including an 8% return on net investment over the life of the plant. See Attachment 1.
2. For low CCS systems, it is estimated that the revenue requirements will generally be about 8% - 12% lower.
3. Beyond the 1800 main station level, revenue requirements per main station for all practicable purposes may be said to level off at the requirements shown for the 1800 station size.

Centrex-CO Through #5 X-Bar

Study assumed following conditions:

1. The #5 X-bar central office is economically located from a wire center standpoint.
2. A minimum expectation of 1,000 to 2,000 total Centrex-CO main stations will be served by the #5 X-bar office in the foreseeable future.

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3. Offering does not result in the displacement of existing SxS-type PBX equipment.

   It is assumed that the Companies will not generally wish to furnish Centrex-CO except where the economics involved are particularly favorable such as where new large installations or major rearrangements of existing large PBX's are involved. The selection of candidates for Centrex-CO service will require, particularly, coordination between Marketing, Traffic, and Engineering Departments.

Revenue requirements for the components were developed on the following basis:

Central Office Equipment

1. Portion of #5 X-bar needed to handle intra-customer traffic, transfer of incoming calls and automatic identification of outgoing calls.
2. Portion of #5 X-bar required to handle incoming and outgoing traffic.

Costs were developed by determining the busy hour calls per main station based on Traffic Order studies and the cost for each type of busy hour call.

The investment in land and buildings, interlocal trunks, station apparatus and wiring is also included.

Station Local Outside Plant

Based on current costs for new cable plant and supporting structures. Costs were developed for various route distances. (See Attachment 2.)

Summary, Centrex-CO Through #5 X-Bar - Revenue Requirements

Includes costs to furnish same service features as provided in the Centrex-CU case except that automatic extension identification is provided in place of CAMA or toll operator identification and an allowance is made for use of Company - provided power and floor space. Also covers cost of incoming and outgoing traffic (not in Centrex-CU study) and station loop.

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Excludes costs for attendants' positions and automatic call distribution equipment, associated attendant trunks (dial '0', transfer and listed number).

Centrex-CO Through #5 X-Bar - Revenue Requirements

	Per Main Station Per Month		
	High CCS System		
Customer Location	300 M.S.	600 M.S.	1800 M.S.
Within 1 mile of Central Office	$ 9.12	$8.37	$7.77
Within 1½ miles of Central Office	9.35	8.60	8.00
Within 2½ miles of Central Office	10.15	9.40	8.80

Notes:

1. Study assumes that within a radius of one airline mile from the central office, the average loop length would be 0.6 mile.
2. Revenue requirements are based on current average System experience including 8% on net investment over the life of the plant. (See Attachment 3.)
3. For low CCS systems the average revenue requirement will generally be about 10-15% lower.
4. Beyond the 1800 main station level, revenue requirements per main station remain relatively constant.

Centrex-CO Through SxS-Type PBX

Consideration is now being given to another method that might be used to furnish Centrex-CO service. The basic plan calls for the use of a centralized SxS-type PBX system to serve a number of large users located in close proximity. It appears to have promising possibilities at this time.

In developing our estimated revenue requirements it has been assumed that:

1. SxS-type PBX Centrex-CO would serve customers within a building or in adjacent buildings.
2. Switching equipment is in rented space in the building.

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3. Study included three customers, one with 300 main stations; one with 600 main stations; and a third with 1800 main stations totaling 2,700 main stations, all served from a common switching system.

One Company is exploring the possibility of providing Centrex-CO using centralized SxS-type central office equipment. Although it might be anticipated that revenue requirements would be similar to centralized SxS-type PBX equipment, actual costs have not been developed as yet.

Summary, Centrex-CO Through SxS-Type PBX - Revenue Requirements

Based on furnishing same service features as included in Centrex-CU "package."

Excludes attendants' positions and automatic call distribution equipment and exchange trunks.

Centrex-CO Through SxS-Type PBX - Revenue Requirements

	Per Main Station Per Month		
	High CCS System		
Serving Central Office	300 M.S.	600 M.S.	1800 M.S.
Step-by-Step	$4.20	$3.95	$3.55
Future #5 X-Bar	5.30	4.80	4.00
Common Control	5.75	5.15	4.25
Additional for PBX (SxS) ANI (when developed)	0.15	0.15	0.15

Notes:

1. The savings obtained by centralizing PBX equipment over furnishing separate PBX's is more than offset by the rent paid by the Company for space and somewhat longer runs of house cable. However, no attempt has been made in this study to put a dollar value on advantages to the Company and customer in the form of shorter installation intervals, faster maintenance service, avoiding high cost moves of equipment, etc.

2. For low CCS systems the revenue requirements will generally be about 5% to 10% lower.

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Attendants' Positions

Present plans call for using either a new type attendants' console or 608A cord switchboard in most installations. The positions will be associated with automatic call distributing arrangements. Development work is under way.

Based on current estimated costs, it appears that the monthly revenue requirement per position will be in the order of:

Position and Associated Equipment

	Centrex-CU			Centrex-CO *		
	300 M.S.	600 M.S.	1800 M.S.	300 M.S.	600 M.S.	1800 M.S.
Console, Each	$136.00	$124.00	$105.00	$178.00	$165.00	$145.00
608A Switchboard, Each	160.00	152.00	140.00	160.00	152.00	140.00

* Additional monthly costs for outside plant pairs per attendant position:

Customer Location	Console (35 pairs)	608A (15 pairs)
Within 1 mile of Central Office	$17.15	$ 7.35
Within 1½ miles of Central Office	25.20	10.80
Within 2½ miles of Central Office	53.20	22.80

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SECTION III
Attachment 1

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SUMMARY, CENTREX-CU - REVENUE REQUIREMENTS

(Excludes trunks and attendants' positions)

High CCS Systems	300 M.S.	600 M.S.	1800 M.S.
	Per Main Station Per Month		
1. Step-By-Step Central Office			
Basic SxS-Type PBX - No Centrex Including Station and Wiring	$3.15	$3.05	$2.85
Added Centrex-CU Features Including PBX Additions	0.75	0.65	0.50
Rearrangements and Changes	0.05	0.05	0.05
Total Revenue Requirement	$3.95	$3.75	$3.40
2. Future #5 X-Bar Central Office			
Basic SxS-Type PBX - No Centrex Including Station and Wiring	$3.15	$3.05	$2.85
Added Centrex-CU Features Including PBX Additions	1.85	1.50	.95
Rearrangements and Changes	0.05	0.05	0.05
Total Revenue Requirement	$5.05	$4.60	$3.85
3. Common Control Central Office *			
Basic SxS-Type PBX - No Centrex Including Station and Wiring	$3.15	$3.05	$2.85
Added Centrex-CU Features Including PBX Additions	2.25	1.85	1.20
Rearrangements and Changes	0.05	0.05	0.05
Total Revenue Requirement	$5.45	$4.95	$4.10
4. Additional for PBS (SxS) ANI (when developed)	$ .75	$ .30	$ .15

* Includes panel, #1 X-bar and #5 X-bar - present, central offices.

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SECTION III
Attachment 2

EXCHANGE OUTSIDE PLANT COSTS

PER PAIR

Current Cost For New Feeder Cable Plant And Supporting Structures

Radius From C.O. of Serving Area in Miles	Average Loop in Miles	Cost Per Pair: Investment	Cost Per Pair: Monthly Carry Chgs.
	(a)	(b)	(26%/Yr.÷12 Mos.)
.5	.3	$ 13	$0.28
1.0	.6	23	0.49
1.5	.9	33	0.72
2.0	1.2	46	1.00
2.5	1.5	70	1.52
3.0	1.8	91	1.97
3.5	2.1 *	115	2.50
4.0	2.4	144	3.12
4.5	2.7	170	3.69

* Systemwide-Average Exchange Central Office Loop

(a) Assumes that ½ of the Centrex-CO stations would be located within the center 25% of the total area or that area circumscribed by a radius ½ of the total circle radius.

(b) Based on the average of the shortest and longest loop: the shortest loop being 1000 feet, the longest 1.2 times the radius.

Cost of the main station loop is based on feeder cable excluding distribution cable and terminals since it is assumed sufficient additional pairs will be required to justify a new express cable to the customer.

SECTION III
Attachment 3

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CENTREX-CO THROUGH #5 X-BAR - REVENUE REQUIREMENTS

Customer Located Within 1 Mile of Central Office

	Per Main Station Per Month		
High CCS Systems	300 M.S.	600 M.S.	1800 M.S.
Intercommunication ø	$3.45	$3.30	$3.05
Incoming and Outgoing Traffic	4.10	3.50	3.15
Station and Wiring	1.08	1.08	1.08
Station Loop * (1 mile)	.49	.49	.49
Total	$9.12	$8.37	$7.77
Added Loop Cost if Customer is Located:			
Within 1½ Miles *	$0.23	$0.23	$0.23
Within 2½ Miles *	1.03	1.03	1.03

ø Includes Transfer and Automatic Station Identification

* See Attachment 2

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SECTION IV

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BASIC RATE TREATMENT

General

The Companies generally agree that the rate structure for Centrex service should recognize the following fundamental considerations: -

1. Rates should reflect value to the customer and the costs involved.
2. The value-of-service principle of exchange rate bands should be maintained in any new rate structure.
3. Centrex rates should be related to rates for basic exchange (individual line, PBX trunk, etc.,) and conventional PBX services.
4. A minimum 8% return should be earned on the additional investment for Centrex features. Somewhat higher earnings, consistent with high development of the service, should be considered where practicable to help improve overall return on the total Centrex package.
5. The similarity of service features makes it desirable to have a single Centrex offering regardless of serving method (Centrex-CU or Centrex-CO).

   Slightly higher rates for Centrex-CO service are necessary to reflect the value of floor space and power provided by the Company.
6. Rates for fully-restricted stations should meet competition of privately-owned interior systems.
7. The rate treatment should appeal to the broadest possible segment of the present PBX market consistent with the costs involved.

   Ultimate objective is to make Centrex the standard offering for substantially all customers now in the PBX category.
8. The System stands to benefit from the reduction of circuit and operator holding time and the expectation of decreased person-to-person and time-and-charge traffic.

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As the result of discussions with the committee of Associated Company rate representatives it seems generally desirable for the Companies to be as nearly uniform as practicable in both rate approach and conditions of offering.

It has been generally agreed that the Centrex service and rate offering (Centrex-CU and Centrex-CO) should be designed to meet the following general objectives.

1. Basic features of in-out dialing, such as intercept, transfer and night connections should be non-optional services.
2. Billing by Centrex main station number should not carry a separate identifiable charge.
3. Rate should be established on a "package" basis.

   Most desirable objective is a rate per station that covers all equipment and facilities (except attendants' positions) furnished the customer.

   Major advantages are that the price structure for Centrex-CU and Centrex-CO would appear similar and Company would insure the proper quality of service. Limited experience indicates a high degree of customer acceptance.

   By adopting an all inclusive "package," the value-of-service principle of exchange rate bands is recognized by similar gradations in charges. However, it does not seem necessary to have a Centrex rate for each existing exchange rate group.

   The value principle could be maintained by having three rate levels and thus avoid otherwise relatively small increments.
4. In message rate cities there would be no message allowance associated with each station even though exchange trunks are included in the rate "package."

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It is felt that since this essentially follows the present pattern in most message rate cities (no message allowance except on the initial trunk) it will be a completely acceptable rate structure from a customer viewpoint. Also, it gives the customer the advantage of "lumping" his outgoing low and high calling rate stations together and paying for the total actual messages used, so that there is no unused allowance.

5. A bridged extension station should have a lower charge than a Centrex main station. Also, should be at the same level whether Centrex-CU or Centrex-CO.

6. Fully-restricted station should be priced below unrestricted station. Also, same fully-restricted station charge to apply statewide.

7. Partially-restricted station should have same charge as unrestricted station.

8. In line with pricing philosophy of business generally, there should be a lower price for volume purchases.

   A three-step schedule appears suitable to balance administrative considerations against the declining revenue requirements with increased size.

   Three steps are desirable to protect the Company's investment in the smaller installations (300-400 stations) while at the same time insuring that larger customer's (over 1,000 stations) charges are in line with the rather substantially lower costs involved.

   However, consideration of multi-location installations led to the introduction of a fourth step which would apply for the first 50 main stations at both the primary and any secondary locations. (See Section V).

9. Considering the revenue requirements involved and the need for an orderly introduction of the service, the rate schedule should be initially developed so that the minimum charge established will be attractive to customers down to about the 300 station level.

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Although costs increase sharply for installations of less than 300 stations, the Companies should consider steps to reduce the minimum level at the earliest practicable date.

Furthermore, there may be situations where, even at the outset, the density of Centrex candidates will warrant a somewhat lower minimum as a means of securing optimum loading of central office facilities devoted to the service. In recognition of this, several Companies are considering a 100-station minimum for Centrex-CO, at least in certain portions of their territory.

10. It is particularly important that filed tariffs covering the Centrex service offering be worded so that the Company reserves the sole right to determine the central offices in which Centrex-CO service will be furnished.

    This is considered necessary to protect the Company in those cases where Centrex-CO service could not be economically justified, thus protecting the general body of rate payers.

    Customer always has alternative of Centrex-CU service.

    The apparent discrimination can be legally supported.

11. Installation charges (in addition to service connection charges) are desirable to cover a portion of the non-recoverable costs, to improve first year return and as protection against customer-initiated moves (actually combined in rate treatment - see discussion of Service Connection Charges).

12. Termination charges should apply.

    A revenue guarantee for a fixed period (probably 2-3 years), should be considered.

13. The rates for Centrex-CO service should be the same whether furnished through SxS-Type PBX or #5 X-bar arrangements.

14. The station identification feature is an integral part of the Centrex offering.

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Where Centrex-CU is furnished through a #5 X-bar central office, every reasonable effort should be made to carry the customer's outgoing traffic to the nearest toll operator center (manual or CAMA) until PBX ANI becomes available.

Development of Rate Treatment

Because of the different conditions involved in each state, it does not seem practicable to develop a single rate schedule that would have Systemwide application. For example:

The mix of central office equipment differs.

Basic exchange rate schedules are different both in structure and rate levels.

Charges for conventional PBX service vary.

Customer requirements vary rather widely between locations.

Therefore, a method of approach has been developed for the Companies to use in determining the level of Centrex rates that would best meet their individual situations.

Study Approach

The following illustrates the steps to be taken by a Company in developing appropriate rate levels for Centrex service, using Ohio Bell's operating territory as an example:

1. Determine the desirable number of rate groups for the Centrex offering.

   It was the consensus of the rate committee that three groups would be appropriate to reflect value-of-service considerations in those cases where trunks were made an integral part of the Centrex rate "package." Also, this avoids relatively small increments between established rate groups.

   For purposes of illustration:

   Centrex Schedule I covers present exchange rate groups I to IV inclusive - less than 67,000 telephones in Local Service Area.

   Centrex Schedule II covers present exchange rate groups V to VII inclusive - 67,000 to 374,999 telephones in Local Service Area.

Centrex Schedule III covers the Cleveland Metropolitan Area.

Under Centrex Schedules I and II, service would be on a flat rate basis. Centrex Schedule III contemplates a message rate offering only.

2. Attachment 1 (for Centrex-CU) and Attachment 2 (for Centrex-CO) show the method used in deriving the rate levels required for various sized systems in the Centrex schedules.

   The cost of the Centrex-CU in-dial feature is based on an assumed statewide central office mix of 40% SxS, 20% #5 X-bar (future) and 40% Common Control (panel, #1 X-bar and #5 X-bar - present).

   The assumptions regarding central office mix reflect the situation that might reasonably be expected to obtain within a relatively short period of time of about five years.

   The trunk revenue per station included in each case was based on increments developed as per Attachment 3. Such allowances were considered to adequately cover the incoming and outgoing central office and associated outside plant costs.

3. Attachment 4 shows the development of the weighted-average revenue requirement for Centrex-CU and Centrex-CO based on the following assumptions:

   a. Service is furnished anywhere within the base rate area for primary exchange service (including Centrex-CO loop costs for 2½ miles maximum - average loop of 1½ miles).

   b. Weighted averages are based on 80% Centrex-CU and 20% Centrex-CO serving arrangements.

4. Attachment 5 shows development of the bridged extension rate.

5. Attachment 6 shows development of the fully-restricted station rate using a similar approach to that described above for main station rates.

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Suggested Rate Treatment

The following suggested rate treatment based on the above considerations will cover the average revenue requirements. No recognition has been given to probable System savings at this time since they are somewhat speculative and probably will not materialize to any extent until there is a rather broad development of Centrex service.

Illustrative Rate Treatment - Based on Ohio Factors

Per Main Station Per Month

		Centrex-CU				Centrex-CO
Group	Telephones in L.S.A.	First 50	Next 250	Next 600	Over 900	Added Charge
Centrex Schedule I	Less than 67,000	$ 9.50	$ 9.00	$7.00	$4.50	$0.25
Centrex Schedule II	67,000 to 374,999	10.75	10.25	7.75	5.00	0.35
Centrex Schedule III	Cleveland Met. Area	8.00	7.00	5.75	4.00	0.50

Notes: 1. All Centrex schedules - minimum charge is for 300 main stations at any one location for the same customer.

2. Centrex Schedule III - no message allowance included.

Bridged Extension Telephones:

Schedules I and II - Flat Rate	$ 3.00 each
Schedule III - Message Rate	2.75 each

Fully-Restricted Telephones:

Schedules I, II and III	$ 3.50 each

Attendants' Positions:

Console	$125.00 each
608A Cord Switchboard	$125.00 each

For the above charges the Company will furnish all equipment and facilities required by the customer (telephone, switching equipment, outside plant for trunks or individual station loops, etc.) for complete service with in-dialing,

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extension identification, intercept, transfer, night connections, and for the released loop operating feature. Company-provided space and power is, of course, included in the Centrex-CO offering.

Also, the suggested rates contemplate that telephones will be furnished in different buildings anywhere on the customer's same continuous property without application of any additional charge (mileage, cable carrying or flat rate circuit charges).

The purpose of the "first 50 stations" rate is to cover costs involved in providing service at more than one location of the same customer on non-continuous property in the same central office area. This treatment is in lieu of mileage charges as discussed in Section V.

Although the make-up of the Centrex-CO rate structure contemplates a basic serving area 2.5 miles in radius (average main station loop of 1.5 miles), it seems that the Companies might find it more practicable to furnish the service anywhere within the existing base rate area established for primary exchange service, provided that service did not extend beyond the boundaries of the central office district involved.

> This plan avoids complications of having two base rate areas to administer (basic exchange and Centrex) and may seem more reasonable to customers and regulatory bodies.

The rate treatment suggested above assumes that it is practicable to earn an 8% return on the overall Centrex investment at current cost levels. In those Companies where present conventional PBX equipment rates are not fully compensatory, some downward modification may be initially required in rate levels to insure a marketable service offering. The objective should be to improve overall Company return. This objective might still be realized to a lesser degree, depending on the extent of the downward modification.

Service Connection Charges

It is proposed that a new schedule of Service Connection Charges (S.C.C.) be established for Centrex service. It would apply uniformly to both Centrex-CU and Centrex-CO customers. The suggested levels are lower than present S.C.C. charges for business exchange and PBX trunk lines ($7.00 - $10.00) but higher than present business and PBX extension station S.C.C. charges ($3.50 - $5.00).

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Also, it is proposed that there be no separate installation charges associated with the equipment (except for attendants' facilities) furnished for Centrex service, even though a number of the Companies now apply such charges (in addition to S.C.C.'s) for conventional PBX services.

Some of the advantages seem to be:

1. It should help to reinforce our position with regulatory bodies and customers since Centrex service can not then be directly compared to regular business exchange or conventional PBX services.

2. The "packaging" of service connection and installation charges together simplifies the rate structure.

   Should be more readily understood by customers than separate charges.

   Essentially retains the desirable features of installation charges, such as recovering a portion of the non-recoverable costs, helping to improve first-year return and giving some added protection where customer-initiated equipment moves are involved.

3. It facilitates uniform rate treatment for both Centrex-CU and Centrex-CO customers.

   It would seem to be particularly difficult in the Centrex-CO case to determine precisely what the non-recoverable items might be in a particular case if separate installation charges (in addition to S.C.C.'s) were to be applied. Also, it seems difficult to explain to Centrex-CO customers what the installation charge is meant to cover where only stations and attendants' consoles (switchboards) are on the customer's premises.

Illustrative Service Connection Charge Schedule

Customer Location	Each Centrex Telephone*
Centrex Schedules I and II	$6.00
Centrex Schedule III (Cleveland)	7.50

* Applies to each main, bridged and restricted Station.

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Inside Move Charges

When a Centrex telephone is moved to another location on the customer's premises it is suggested that the Companies apply their existing tariff charges (now generally $3.00 to $5.00).

Changes from Conventional PBX to Centrex Service

Where a customer with a conventional PBX takes Centrex service and his five-year contract period has not expired it is suggested that termination charges be handled in the following manner:

> On a change to Centrex-CU service no termination charge would apply since the PBX switching equipment is reused in place.
>
> On a change to Centrex-CO service the termination charge would be applied.

Also, it seems reasonable to apply a change charge to each station changed from conventional PBX to Centrex service. It is suggested that the charge should be the difference between the PBX extension station service connection charges which have already been paid and the new higher Centrex S.C.C.

Contingent Termination Liability

The Companies generally agree that it is desirable to have some protection in the event that a Centrex customer discontinues all or a portion of his service within a relatively short period of time after installation.

Therefore, it is suggested that the service contract for both Centrex-CU and Centrex-CO customers should provide for a basic minimum revenue guarantee for a period of three years.

> In the event that all or a portion of the service (as later defined) is discontinued within three years of the effective contract service date, the customer's termination charge would be based on the remaining monthly rentals for the unexpired period.

Under the suggested plan the minimum revenue guarantee would be established and applied in the following manner:

1. When service was initially established the minimum revenue guarantee would be based on 90% of the unrestricted main stations (excludes bridged and fully-restricted) at the

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immediately lower even hundreds level, although never below 300 unrestricted main stations if this number is accepted as the minimum charge level for the Centrex installation. It is suggested that the "rounding downward" to the immediately lower even hundred be done before the 90% is applied.

For example, if 770 unrestricted main stations were furnished at cut-over the minimum revenue guarantee would be for 630 (=700 x .90) unrestricted main stations for three years.

At any time during the three years following cut-over, the customer could reduce his unrestricted main stations to 630 without incurring a penalty. If the customer's requirements dropped below 630 unrestricted main stations in this period, the Company would bill for the minimum guaranteed number for the remainder of the three years. It is visualized that a multi-location customer would be billed for any such disconnected stations at the level of monthly charges (on the "tapered" scale of station charges) that would apply if they were reconnected at the location having the largest number of stations. This would, of course, give the customer the benefit of the lowest possible station charge.

The "Remarks" space on the customer's order might indicate the minimum number of unrestricted-stations to be charged for and the date at which the minimum would expire. The remark could be carried forward on every order issued on the same account.

2. When subsequent growth occurred in the number of unrestricted main stations (excludes bridged and fully-restricted) a new minimum revenue guarantee would be established when the growth exceeded 20 unrestricted main stations beyond the next higher hundreds level.

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For example, assume customer in paragraph "1" above grew from 770 to 821 unrestricted main stations. When that point was reached a new minimum revenue guarantee would be established for a three-year period for 720 unrestricted main stations (=800 x .90).

If the customer's actual station requirements dropped below 720 unrestricted main stations at any time within three years of the last established minimum revenue guarantee date, the Company would bill for 720 unrestricted main stations for the remainder of the period.

This treatment is based on a "Last In, First Out" principle which is necessary to the preservation of our investment in the added equipment. Although this may seem to be reestablishing a termination liability on the stations that were connected at cut-over it does not actually have that effect.

Assume that five years after cut-over the customer grew from 770 to 821 unrestricted main stations. In the above example, this would establish a minimum revenue guarantee for 720 stations although his previous revenue guarantee of 630 stations had already expired. Suppose, however, instead of the 720 station guarantee a 90 station guarantee (=720 minus 630) had been used. Then the customer could disconnect as many as 521 stations the very next week and, since he would still be paying for more than 90 stations (the 300 minimum would be left), it could be claimed that the 90 station revenue guarantee was being met. In short, there would be no general protection for added blocks of stations and equipment.

The "Last In, First Out" treatment protects our investment by assuming that the first 90 stations disconnected below the 720 guarantee figure are the stations most recently installed, i.e., the stations responsible for raising the guarantee from 630 to 720. If the customer continued to disconnect stations below the 630 figure, however, he would not be billed for a full 720 but would be billed for 90 more than he had in service, for three years from the date of the new contract. This would mean that he was not being billed for any of the

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original 630 station guarantee that had expired but that he was continuing to pay for the difference in the guarantees (720 minus 630), which covered the equipment addition, until the three-year guarantee period on the addition ran out. During this period he could, of course, reconnect up to 90 unrestricted main stations without increasing his monthly rental (although, of course, he would pay Service Connection Charges for the reconnects).

This treatment is consistent with the handling of complete termination of service, covered below, in that the customer would be charged for unexpired revenue guarantees only on those portions of his service which had been in service for less than the established revenue guarantee period.

3. If service were completely terminated, the customer would be billed a termination charge computed on the basis of the separate revenue guarantee dates established for each contract (original and subsequent). It is recommended, however, that only 40% of the unbilled guaranteed revenues be charged to the customer in the event of a complete disconnect since this amount would generally cover the position and switching equipment portions of the Centrex package which are subject to termination liability for conventional PBX customers. The remaining 60% would cover stations, trunks, etc., which are connected for conventional customers with only a 30-day minimum charge.

   Assume customer totally disconnected service 6 months after the addition in paragraph "2" above and that the addition was made two years after cut-over. Customer would then be billed for 40% of 6 months' revenue on 630 unrestricted main stations and 40% of 30 months' revenue on 90 unrestricted main stations.

The administrative difficulties involved in applying these revenue guarantee proposals are kept to a minimum by the rounding downward and 90% provisions in the event of disconnects, and by the rounding upward and 20-extra-station provisions in the event of growth. It is felt that these spreads will cover most normal fluctuations in station requirements for existing customers.

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It was the need to allow for such normal operating fluctuations that seemed to preclude the adoption of other apparently simpler methods of protecting the Companies' investments.

The above plan could be simplified considerably if part "2" (providing for new contracts to cover subsequent growth) were disregarded. This would, however, involve taking risks which might not be justified. A customer might consolidate his operations and grow from 300 stations to 1,000 or more or might, when building a new plant or industrial complex, cut over with a few hundred stations and continue to add large numbers of stations as more of his building space was completed.

Attendants' Positions - Installation Charges

It is suggested that the installation charges for the console and 608A cord switchboard positions should be the same, and the level **would** be that established for 608A positions on conventional dial PBX service.

Attendants' Positions - Termination Charges

It is contemplated that termination charges would be applied to attendants' consoles and positions to protect the Companies against unwarranted position movement by the customer.

It is suggested that the Companies treat consoles and 608A cord switchboards alike. Termination charges would be based on a three-year revenue guarantee contract; the unexpired portion becoming a liability in case of termination.

Customers Located Outside Base Rate Areas

In such cases it seems desirable to apply established extra-exchange-line mileage charges for each loop (main station on Centrex-CO; exchange trunk on Centrex-CU and control circuits and attendants' loops in both cases) when furnished beyond the base rate boundary.

General

The rate development approach described in this section has been directed to pricing Centrex-CU and Centrex-CO alike insofar as practicable so that the Company may retain maximum freedom to determine the serving method.

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In general, there are only three differences in approach:

1. Customers Outside Base Rate Areas

   By applying extra-exchange-line mileage on a per circuit basis it should have the effect of encouraging customers to buy Centrex-CU rather than Centrex-CO service. This protection seems necessary if the Company is to avoid substantial costs for large bundles of extra-long outside plant loops required for Centrex-CO service.

2. Changes from Conventional PBX to Centrex Service

   The cost studies assumed that the Centrex offering would not result in the displacement of existing SxS-type PBX's. Otherwise the cost of providing Centrex service would be substantially increased. Therefore, in the interest of protecting the revenue-producing value of PBX investments it seems desirable to apply termination charges on change-overs from existing dial systems to Centrex-CO but not to Centrex-CU service.

3. Added charge for Centrex-CO service

   Charging a rate for Centrex-CO service that is slightly higher than Centrex-CU is considered reasonable to represent the value to the customer of the floor space and power furnished by the Company under Centrex-CO. Also, it is necessary in order to avoid discrimination between customers furnished essentially the same service but provided by two different methods.

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SECTION IV
Attachment 1
Page 1

CENTREX-CU - RATE DERIVATION - OHIO

	Per Main Station Per Month		
	300 M.S.	600 M.S.	1800 M.S.
Schedule I - Flat Rate			
PBX and Station	$ 3.15	$3.05	$2.85
In-Dial Features	1.62	1.35	.92
Automatic Number Ident.	.55	.55	.55
Exchange Trunks	3.24	2.53	1.34
Attendant Equipment	.14	.05	-
Continuous Property Circuits	.15	.15	.15
Total	$ 8.85	$7.68	$5.81
Schedule II - Flat Rate			
PBX and Station	$ 3.15	$3.05	$2.85
In-Dial Features	1.62	1.35	.92
Automatic Number Ident.	.55	.55	.55
Exchange Trunks	4.44	3.53	1.84
Attendant Equipment	.14	.05	-
Continuous Property Circuits	.15	.15	.15
Total	$10.05	$8.68	$6.31
Schedule III - Message Rate			
PBX and Station	$ 3.15	$3.05	$2.85
In-Dial Features	1.62	1.35	.92
Automatic Number Ident.	.55	.55	.55
Exchange Trunks	.80	.60	.33
Attendant Equipment	.14	.05	-
Continuous Property Circuits	.15	.15	.15
Total	$ 6.41	$5.75	$4.80

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Assumptions:

PBX and Station

Covers costs for basic switching, house cable, station and wiring for conventional PBX system.

In-Dial Features

Includes: (a) PBX switching equipment required to provide direct inward dialing (b) excess outside plant investment for inter-office trunks and (c) net C.O.E. investment (local and tandem) plus a charge for vacated equipment and building space.

Based on statewide central office mix of 40% SxS, 20% #5 X-bar (Future) and 40% common control (panel, #1 X-bar and #5 X-bar - Present) about 5 years hence. Also, includes additional PBX switching costs.

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Automatic Number Identification

Average costs spread evenly regardless of size of installation based on estimated development of about 60% - 300 stations, 20% - 600 stations and 20% - 1800 stations.

Exchange Trunks

Based on increments per station developed in Attachment 3. Assumes present trunk revenues adequately compensate for provision of central office equipment and outside plant. Covers incoming and outgoing traffic.

Attendant Equipment

Covers revenue requirements for attendants' positions and associated equipment including control relays, etc. less $125 per month (proposed tariff charge) for either each console or each 608A cord switchboard position. Excess costs are included on an estimated development of 60% consoles and 40% switchboards.

Continuous Property Circuits

Represents an allocation of present revenues obtained from mileage, cable carrying or flat rate charges where service is furnished in a different building on the same continuous property of a customer.

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CENTREX-CO - RATE DERIVATION - OHIO

	Per Main Station Per Month		
	300 M.S.	600 M.S.	1800 M.S.
Schedule I - Flat Rate			
Intracustomer Traffic	$ 3.45	$3.30	$3.05
Incoming and Outgoing Traffic	3.24	2.53	1.34
Station and Wiring	1.08	1.08	1.08
Station Loop	1.24	1.30	1.40
Attendant Equipment	.58	.38	.16
Continuous Property Circuits	.15	.15	.15
Total	$ 9.74	$8.74	$7.18
Schedule II - Flat Rate			
Intracustomer Traffic	$ 3.45	$3.30	$3.05
Incoming and Outgoing Traffic	4.44	3.53	1.84
Station and Wiring	1.08	1.08	1.08
Station Loop	1.24	1.30	1.40
Attendant Equipment	.58	.38	.16
Continuous Property Circuits	.15	.15	.15
Total	$10.94	$9.74	$7.68
Schedule III - Message Rate			
Intracustomer Traffic	$ 3.45	$3.30	$3.05
Incoming and Outgoing Traffic	.80	.60	.33
Station and Wiring	1.08	1.08	1.08
Station Loop	1.24	1.30	1.40
Attendant Equipment	.58	.38	.16
Continuous Property Circuits	.15	.15	.15
Total	$ 7.30	$6.81	$6.17

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Assumptions:

Intracustomer Traffic

Covers costs for basic switching of intracustomer calls, transfer and automatic station identification.

Incoming and Outgoing Traffic

Based on increments per station developed in Attachment 3. Assumes present trunk revenues adequately compensate for provision of central office equipment and outside plant.

Station and Wiring

Current costs for telephone and inside wiring.

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Station Loop

Represents the outside plant costs for the average main station loop of 1.5 miles from the serving central office (maximum of 2.5 miles from C.O.) as shown in Section III, Attachment 2 less an allowance for the outside plant pairs covered by the normal exchange trunk revenue.

Attendant Equipment

Covers revenue requirements for attendants' positions and associated equipment including control relays, etc. less $[illegible] per month (proposed tariff charge) for either each console or each 608A cord switchboard position. Excess costs are included on an estimated development of 60% consoles and 40% switchboards.

Continuous Property Circuits

Represents an allocation of present revenues obtained form mileage, cable carrying or flat rate charges where service is furnished in a different building on the same continuous property of a customer.

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Attachment 3

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TRUNK REVENUE PER MAIN STATION PER MONTH

actuals from Rev/System

Ohio Rate Group	Monthly Trunk Rate	Revenue for System 300 M.S. 56 Trunks	Revenue for System 600 M.S. 87 Trunks	Revenue for System 1800 M.S. 140 Trunks	Increment per Main Station 300 M.S.	Increment per Main Station 600 M.S.	Increment per Main Station 1800 M.S.
I	$11.65	$ 652.	$1014.	$1631.	$2.18 ✓	$1.69 ✓	$0.90 ✓
II	13.90	778.	1210.	1946.	2.60	2.01	1.08
III	16.15	904.	1405.	2261.	3.02	2.34	1.25
IV ✓	18.40	1030.	1601.	2576.	3.44	2.67	1.43
V	21.10	1181.	1836.	2954.	3.94 ✓	3.06	1.64
VI	23.35	1306.	2032.	3269.	4.36 ✓	3.38	1.81
VII	24.85	1390.	2162.	3479.	4.64 ✓	3.60	1.93
Cleveland Met. Area	4.30	241.	374.	602.	.80	.60	.33

For Centrex-CU study assume:

Centrex Schedule I - to cover present rate groups I to IV inclusive - all Flat Rate

Centrex Schedule II - to cover present rate groups V to VII inclusive - all Flat Rate

Centrex Schedule III - to cover message rate offering in Cleveland Metropolitan Area 1 MB rate is $9.05 with 90 message allowance @ 5¼¢.

Since Centrex-CO stations will have no message allowance the "Readiness to Serve" charge is assumed to be $4.30 ($9.05 minus 90 x $0.0525). Most Companies can use their auxiliary line rate for this purpose.

For rate "packaging" purposes (Attachments 1 and 2) assume the following increments:

	Increment Per Main Station 300 M.S.	Increment Per Main Station 600 M.S.	Increment Per Main Station 1800 M.S.
Centrex Schedule I - Flat Rate	2.81 $3.24	2.18 $2.53	1.17 $1.34
Centrex Schedule II - Flat Rate	4.31 4.44	3.34 3.53	1.79 1.84
Centrex Schedule III - Message Rate	.80	.60	.33

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WEIGHTED REVENUE REQUIREMENT - OHIO

Per Main Station Per Month

	Centrex-CU			Centrex-CO			Weighted Average		
Rate Schedule	300 M.S.	600 M.S.	1800 M.S.	300 M.S.	600 M.S.	1800 M.S.	300 M.S.	600 M.S.	1800 M.S.
I	$ 8.85	$7.68	$5.81	$ 9.49	$8.49	$6.93	$ 8.98	$7.84	$6.03
II	10.05	8.68	6.31	10.59	9.39	7.33	10.16	8.82	6.51
III	6.41	5.75	4.80	6.80	6.31	5.67	6.49	5.86	4.97

Assumptions:

1. The weighted average is based on 80% Centrex-CU and 20% Centrex-CO serving arrangements.
2. The revenue requirements for Centrex-CO service shown on Attachment 2 have been reduced by 25¢, 35¢ and 50¢ for Schedules I, II and III respectively, recognizing that such amounts will cover the floor space and power furnished by the Company and will be charged for separately.

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SECTION IV
Attachment 4

SECTION IV
Attachment 5

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DEVELOPMENT OF BRIDGED EXTENSION TELEPHONE RATE

	Revenue Requirement Per Telephone Per Month
Switching Equipment*	$1.68
Station and Wiring	1.08
Totals	$2.76

* Assumes bridged extension adds about 30% - 40% to call carrying load of PBX and central office equipment.

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1800 M.S.

$6.03

6.51

4.97

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SECTION IV
Attachment 4

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DEVELOPMENT OF CENTREX FULLY RESTRICTED STATION RATE

	Revenue Requirement Per Month	
	Centrex-CU	Centrex-CO
Switching Equipment	$2.07	$2.29
Outside Plant - 2.5 Mile Loop	-	1.52
Station and Wiring	1.08	1.08
Totals	$3.15	$4.89

Suggested Rate Treatment

Assume 80% Centrex-CU and 20% Centrex-CO mix

Composite Rate:
(.80 x $3.15) + (.20 x $4.89)= $3.50

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SECTION V

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MULTI-LOCATION ARRANGEMENTS

General

There are many possible physical arrangements that can be provided to serve the needs of multi-location Centrex customers. The geographical relationship of the various customer locations, the number of stations at each location, the location of central offices and CAMA tandem centers, the outside plant network, etc., present the Engineering and Traffic people with widely varying problems each time Centrex is furnished to a multi-location customer. The rate recommendations in this section, like those in Section IV, are designed to provide maximum flexibility of plant design. This should result in better use of existing plant and foster a sound program of plant additions.

> There is, as mentioned previously, a danger that flexibility could be seriously compromised if the rate treatment for Centrex-CU and Centrex-CO were not identical. A Company would be hard pressed to specify the serving method for a Centrex customer if the rate treatment produced a significant cost differential between different serving methods.

The need to establish a uniform treatment for all Centrex customers and the desire to simplify administration to the fullest possible extent, have been primary considerations in developing the following recommendations.

Off-Premises Extensions - Same Base Rate Area - Same Central Office Area

The Centrex-CO main station rate includes an increment to cover the cost of the conductors used to connect stations in the central office base rate area with the switching equipment on Telephone Company premises. Within a given central office base rate area it can be assumed that the average off-premises extension loop from the central office will be no longer than the average loop that would have to be provided to serve the same Centrex-CO station if it were at the customer's principal location. It is even possible to have Centrex-CO off-premise extensions which are so located that they have lower total revenue requirements than on-premises stations.

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> Discussions with the Companies disclosed an almost universal reluctance to apply direct mileage charges to Centrex-CO off-premises extensions (within the central office base rate area) since the mileage charge could not be supported on the basis of cost.

With Centrex-CU installations, the physical arrangements involved in providing off-premises extensions are the same as for conventional PBX installations. With the above considerations in mind a method has been developed of protecting existing conventional mileage schedules without making specific mileage charges. Essentially it depends on the "tapering" of the main-station rate schedule.

The rate schedule shown in Section IV - Basic Rate Treatment, provides for a higher rate on the first 50 main stations than on subsequent main stations. Therefore, if the station rate schedule is reapplied, starting with the highest rate, at each location having off-premises extensions, the customer is, in effect, paying a somewhat higher rate for these stations than if they had been installed at the main location and all the stations had been priced as a unit. The difference in cost between stations on and off the main premises will, of course, depend on the number of stations on the main premises. Applying the rate schedule shown in Section IV, for instance, would result in a customer with more than 900 stations at his main location paying a differential of $4.00 to $5.75 (depending on the Centrex rate band) to move one station off-premises. If he had 301 stations at his main location, however, the differential cost would be only $2.25 to $3.00 to make such a move. The broad averaging of these effects should provide sufficient compensation to cover the average incremental costs incurred in furnishing both types (CU and CO) of off-premises stations, as well as tie lines, as covered below.

The operating efficiencies inherent in servicing a single system at one location contribute to the establishment of the tapered rate. Since this kind of efficiency is lost in multi-location cases, it should seem reasonable to customers that a basic "cheaper by the dozen" treatment would only apply when large quantities of stations can be located in the same place.

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An incremental charge for continuous-property mileage has been included in the basic schedule of station rates. All stations on continuous-property can therefore be treated as though they were in the same building, i.e., the basic schedule of station rates would not be reapplied in such cases.

Satellites - Same Base Rate Area - Same Central Office Area

The main station rates for Centrex-CU contain an increment for trunks between the central office and the SxS-type PBX equipment on the customer's premises. Stations associated with a satellite switching system would, therefore, be entitled to in-out trunks at no additional charge if the satellite and main location were in the same central office base rate area. This same treatment could be accorded any tie lines used, in effect, to extend the in-out trunks from the main location to the satellite. However, the tie lines connecting the main customer location and the satellite carry intercommunication traffic in addition to the in-out traffic. Although any tie lines provided for the handling of in-out traffic, being in lieu of trunks, should be provided at no additional charge, it can, of course, be argued that tie lines devoted to the handling of intra-customer traffic should still be subject to specific charges. However, although the intra-customer tie lines could be identified for a Centrex-CU customer, there would be no way to separate out their equivalent in a Centrex-CO situation. It is therefore recommended that satellite stations in the same central office base rate area be given the same rate treatment as off-premises stations in the same central office base rate area.

This treatment is consistent with the packaged-rate approach recommended for Centrex. All outside plant and switching facilities within a base rate area are packaged into the station rate; this will include tie lines and central office, main location and satellite switches.

Starting the station count over for satellite stations as in the case of off-premises extensions would make each of them entitled to the same service privileges. Since the outside plant provided for off-premises stations is used to handle intra-customer as well as in and

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out traffic, all tie lines to a satellite location should be provided free of extra charge regardless of their use.

Basically, this provides for serving all of a single customer's stations in his central office base rate area at rates that depend only on the number of non-continuous-property locations involved. All of the plant necessary to provide this service, regardless of type, being provided with no additional charges for mileage, switches, etc., permits the Company the widest possible latitude in deciding upon the most economical serving method. When satellite switching is used the number of tie lines provided must, of course, give a grade of service that compares favorably with that of off-premises extensions.

Off-Premises Extensions - Outside Base Rate Area - Outside Central Office Area

The packaged Centrex main station rate covers plant costs within a central office base rate area only. Some recognition of plant cost is therefore needed when service is extended beyond that boundary. Since extra-exchange-line-mileage rates are designed to cover the costs incurred in extending outside plant from the base rate area boundary to the exchange boundary, it would seem appropriate to apply them also to cover off-premises Centrex stations located in that same area.

In multi-office exchanges, off-premises extensions located in an extra-exchange-line-mileage zone or base rate area associated with a central office different from the one in which the customer's main premises are located would be subject to mileage charges based on the distance from their location to the nearest point on the boundary line of the primary-location central office area. Starting the station count over again with the highest rate of the tapered schedule would cover that portion of the loop within the central office area of the primary location.

Some of the Operating Companies have established flat rate mileage treatment which now applies for all off-premises extensions in adjacent central office areas. Since these uniform charges have generally been developed to cover, on an averaged basis, the loops within each central office area as well as the distance between

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the central office buildings, a customer would, in effect, be paying twice for that portion of the off-premises circuit within the primary central office area if the treatment recommended above were used. Instead of starting the station count over in such cases (which also would compensate for the loop in the primary central office), Companies with the flat-rate treatment may wish to treat the off-premises stations affected as though they were thereby made fully equivalent to a station at the primary location. The off-premises station would then be charged for at the same rate as one more station at the primary location, i.e., the tapered rate schedule would not be reapplied starting with the highest station rate.

Satellites - Outside Base Rate Area - Outside Central Office Area

Satellite stations would be treated basically the same as off-premises extensions outside the central office base rate area. Customers would, however, have to be offered the benefits of tie line operation where appropriate. Any switching equipment at the satellite location would be part of his station rate and he would in addition realize savings by paying mileage on less circuits than would be needed if all of the stations involved were served on an off-premises basis. It seems appropriate to provide satellite switching, and charge regular tie line rates based on the distance between the central offices involved, when it will be to the customer's benefit.

> This may create a demand on the part of some customers for satellite operation (and its potential savings) when they have a requirement for a relatively small number of stations at the same secondary location. An adaptation of existing SxS satellite systems is currently under development to care for requirements down as low as 10 lines. Early indications are that the cost per station for this equipment will be in the same range as for existing 40 to 60 line systems.

Connected Systems

Separate systems of Centrex-CU, Centrex-CO and/or conventional PBX can be interconnected by tie lines. Where such systems are interconnected, each system is considered separately for rate purposes and established tie line rates apply for the facilities between locations.

Tie line measurement has been complicated by the fact that Centrex-CO switching equipment is not located at the customer's premises. If the Centrex-CO switching equipment location were used as one point for measuring, a problem would be generated by having tie line mileage measured differently for Centrex-CO customers than for Centrex-CU customers. Regardless of the equipment locations and the physical method of serving, we are effectively providing facilities to "tie" together two customer locations or premises. Therefore, it appears consistent to measure all tie lines between separate systems on a premises-to-premises basis.

The interconnection of Centrex and non-Centrex installations is covered in Section VI-B.

Connected systems might serve the same or different customers. If one customer desires separate "listed" numbers at different locations, it is recommended that he be treated as two separate customers for rate purposes. This would, of course, preclude the provision of the free tie lines that would otherwise be provided in the same central office base rate area.

It is not contemplated that more than one corporate or business enterprise be served from a single integrated Centrex system.

The decision as to when related companies or partially or wholly-owned subsidiaries should be considered as different companies would, of course, be determined by whatever criteria are presently applied in each Operating Company.

Cable Carrying Charges

It is contemplated that there would not be any mileage charges on continuous property. As a consequence, there would be no need for cable carrying charge treatment with Centrex service.

In case a customer had been paying cable carrying charges before ordering Centrex, it seems appropriate to review the status of his contract to determine if any refund of installation charges (on a depreciated basis) might be in order.

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SECTION VI

OTHER RATE ASPECTS

The Centrex offering is in many ways, still evolving. Details of the offering are subject to change as more experience is gained with actual installations. This applies particularly to Part A of this section, which covers some of the extra "features" not included in the basic Centrex package. An attempt has been made, however, to outline current thinking with the thought that changes, when made, will not substantially affect the principle stated.

Part B of this section was based on the best information available at the time. However, future experience may generate inquiries and requests from customers that have not been anticipated. It is hoped that such requests will be handled in a manner consistent with the material presented here and that new approaches will be covered with the Engineering and Traffic Departments and discussed with "195" in order to promote the highest practicable degree of System uniformity.

Parts C and D are relatively uncomplicated, though significant adjuncts to the Centrex offering.

SECTION VI

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FEATURES NOT IN PACKAGE

General

This section suggests the basic rate approach for handling the optional service features listed on Attachment 1 to Section II - Description of Offering.

Rate Considerations - Optional Features Covered by Existing Tariffs

Includes tie lines (other than between locations of the same customer in the same base rate area), foreign exchange, conference circuits, connection to customer's paging system, four (or five) digit inter-customer dialing (for airports), and dictation recording trunks.

Available information indicates that the costs involved in furnishing these features in connection with Centrex service will probably not differ from present similar arrangements. Therefore, when furnished in connection with Centrex service, established tariff rates seem appropriate.

Rate Considerations - Busy Verification by Attendant

This feature is generally not recommended by the Traffic Department.

If provided it is assumed that special assembly charges would apply.

Rate Considerations - Attendant Intercept

It is expected that in a limited number of cases Centrex customers may wish to have attendant intercept instead of, or to augment, machine intercept (which is intended as the basic intercept arrangement). Indications are that either arrangement can be provided for about the same cost. Accordingly, Traffic should recommend the method to be used.

If a single intercept arrangement is provided on either basis, there should not be any added charge.

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When customers require both machine and attendant intercept and can select either by operating a switch, it is suggested that the costs involved be handled on a special assembly basis - at least initially.

Machine intercept is furnished without charge supervision but attendant intercept is furnished with charge supervision.

Charge supervision (calling party is charged for a completed call) is used with customer-attendant intercept since intelligence can be transmitted between the attendant and the calling party on such calls.

Rate Considerations - Other

There are a number of features under development such as dial pulsing on auxiliary console, single push-button completion on console or 608A switchboard, etc. Engineering should be consulted regarding their availability.

If such arrangements are furnished on a locally engineered basis during the interim period, it would seem appropriate to apply special assembly charges.

A suggested rate treatment will be developed when firm cost information is available.

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PARTIAL CENTREX INSTALLATIONS

General

Since the Centrex offering is a comprehensive service and includes many different features, some of our present Centrex customers and prospective customers have requested various portions of the complete package. These requests, which will be discussed below, have been for the following:

1. In-dialing only - no station identification on outgoing calls.
2. A mixture of Centrex and conventional PBX service at a single premises.
3. Centrex service restricted to the local service area.
4. Station-identified out-dialing only.

Rate Considerations - In-dialing Only

Equipping a customer's PBX for in-dialing-only results in about the same expenditures by the telephone company as to furnish the complete Centrex service. Station identification would be the only basic feature not furnished and accounts for only a minor portion of the total net costs associated with furnishing Centrex service.

In such cases the Operating Companies generally agree that established Centrex rates should apply. The customer, of course, would be in a position to make use of the station identification feature or not, as he saw fit.

Rate Considerations - Mixing Centrex and Conventional PBX Service

Customers may request that only part of their total PBX stations be equipped for Centrex service and that the remaining conventional PBX stations continue with the existing tariff rates and equipment arrangements. Based on discussions with the Engineering and Traffic people it was concluded that:

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This mixture could be provided for Centrex-CU customers whose Centrex and conventional PBX stations were served from a common step-by-step PBX switching system.

Although mixed systems can be provided with Centrex-CU, there are definite disadvantages, primarily of a service nature, as mentioned in Section VIII - Marketing Considerations.

It is felt that a unified mixed system is not a practical plan for Centrex-CO customers whose Centrex stations are served by #5 X-bar.

Where conventional PBX and Centrex-CU stations are provided as a mixed system, established tariff rates would apply to the conventional PBX stations, and the Centrex portion, for billing purposes, would be treated as a separate system.

However, there is a problem in insuring that the "free" trunks furnished in the Centrex package are not used for incoming and outgoing traffic to the conventional PBX system. This matter is currently being studied in conjunction with our Engineering and Traffic people.

Rate Considerations - Centrex Service Restricted to the Local Service Area

Indications are that an occasional customer may request Centrex service restricted to the local service area. So far, such requests have been from the military. It is felt that Centrex service of such a limited scope should not be offered largely for the following reasons:

1. It would conflict with the nationwide toll dialing program by precluding direct in-dialing to some of the seven digit numbers in a common central office code. Since this is impractical from an equipment standpoint, it would require giving a separate central office code to the restricted Centrex stations to block incoming DDD calls, thereby using valuable office codes to deny DDD completion.
2. Centrex of such a limited scope would confuse callers trying, without success, to complete DDD calls from outside the local service area.

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3. The System doesn't fully benefit when it furnishes all the equipment and telephone numbers needed for nationwide in-out dialing and then restricts use to a local service area.

Rate Considerations - Station Identified Out-dialing-Only

This service is being furnished by a number of the Companies under the Special Billing Numbering Plan (or "QZ" billing plan) as described in A.T.& T. letter C.L. 1476, dated December 29, 1959. Any requests for station identified out-dialing-only can be served in accordance with the foregoing letter.

Illustrative Rate Treatment from C.L. 1476

	Monthly Rate
Dial or Manual PBX Systems	
Each group of 50 extension stations or codes (whichever is the greater), or fraction thereof.	$5.00 *

* Minimum charge $20.00 per PBX system

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LISTINGS

Listing charges will be the same for Centrex as they are for conventional PBX systems. It is recommended that the following listing regulations be applied to Centrex customers:

Company Name: A main listing of the company name is to be provided, giving the "listed number" over which calls will reach the console or switchboard attendant. "Indents" under the main listing can be provided, at additional listing charges, giving the appropriate Centrex station number of specific:

- departments (Eastern Sales, Shipping, etc.)
- locations (Main Gate, Powerhouse, etc.)
- titles (Vice President, Secretary, etc.)
- individuals (Smith, A.B., etc.)

Individual's Name: Personal names can be listed with specific Centrex station numbers, at additional listing charges, in their own proper alphabetical position in the directory.

This arrangement should be encouraged in preference to listing individual names under the main company listing.

Special: It has been suggested that some customers may wish to associate with their main listing some information to the effect that "extension stations may be dialed directly if the extension number is known." It is felt that this additional listing information is of doubtful value since most people who know the seven-digit extension number will probably also know that it can be dialed from the outside. It is therefore recommended that regular charges be applied if a customer wants such information to appear in the directory.

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SERVICE PROTECTION - CENTREX-CO

The nature of the Centrex-CO method of serving (all intercommunication switching done on Telephone Company premises which usually will not be in the same building as the customer) makes it evident that a cable failure would interrupt not only incoming and outgoing services, but intercommunication as well. Although there is little danger of a pressurized cable failing completely from "natural causes," we are faced with the occasional problem of a misdirected bulldozer or an unexpected explosion.

> Since the loss of intercommunication could be very serious in certain locations, it might be well to consider this danger carefully in deciding where to offer Centrex-CO. It is expected that our sales people will recognize the obligation to inform customers about this possibility as appropriate in the course of their negotiations.

In those cases where special arrangements are furnished, such as alternate route facilities, it is assumed that the Companies will wish to charge the customer an additional charge to cover the costs involved.

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SECTION VII

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CERTIFIED MILITARY BASES

General

This section deals with the rate aspects of furnishing Centrex service for certified installations (where stations, distribution plant, positions and, generally, switching equipment are government owned).

It appears at this time that the majority of such installations will be of the Centrex-CU type. In such cases the military will be responsible for furnishing and maintaining the additional PBX switching equipment required at the base for incoming call completion and the vacant level intercept arrangement.

> The Company is responsible for making the necessary changes and rearrangements required in the central office and outside plant facilities to provide the Centrex features.

Attachment 1 shows the development of revenue requirements (including an 8% return on investment) for the Centrex-CU facilities furnished by the Company.

If Centrex-CO service is furnished for a certified base, it appears that the military would meet the Company at the boundary of base and furnish the on-base distribution plant, stations and inside wiring etc. In such cases the Company's costs would be essentially the same as for commercial Centrex-CO situations less an appropriate allowance to cover the cost of the telephone instrument and associated wiring.

> It is estimated that the Company's saving through not having to furnish the on-base distribution plant is offset by the added costs for increased C.O.E. call carrying capacity resulting from the military's use of bridged extension telephones.

Rate Considerations - Centrex-CU

In developing the suggested rate treatment, several alternative plans were considered.

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Charge on basis of telephone numbers assigned: Since each fully mechanized station will have a 7 digit number, this basis of charging could have been used. However, with number-assignment billing, any number of bridged extensions might be added, thereby increasing trunk and central office requirements, without a corresponding increase in charges to the customer.

Also, the government at the earliest installations, expressed a strong preference for billing on a trunk basis and this has been provided for in all cases now working.

Centrex charges on all trunks: Consideration was given to spreading the incremental Centrex charges over all of the trunks serving a certified base. The principal objective in so doing would be to keep the charge for the incoming trunks from reaching too high a level.

This method would help decrease any tendency of the military to take fewer than the required number of trunks for adequate incoming service.

Centrex charges on incoming in-dial trunks only: Cost studies (Attachments 1 & 2) indicate that the revenue requirement per trunk is not so high as to create unfavorable customer reaction. Also, there are other advantages to be gained from loading all incremental costs on the incoming in-dial trunks.

Requests have already been received from the military that we apply regular tariff rates to the "listed number" trunks terminating at the attendant's position. It would seem to be difficult to get the customer to understand the rationale for adding the in-dial charge to trunks not used for that purpose.

The value-of-service principle is maintained by the application of established tariff charges for exchange trunks.

Based on the above considerations it seems desirable for the Companies to applique the Centrex-CU charge to established tariff charges for exchange trunks in each rate group and apply the total amount to the incoming in-dial trunks only. The resulting total figure would be filed by the Companies for "incoming in-dial trunks" (for each rate group).

Attachment 2 shows the method used to determine the applique amount.

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Illustrative Rate Treatment:

Centrex-CU - Recurring Monthly Charges

Each incoming in-dial trunk	Tariff charge plus $12.00*
Each incoming "listed number" trunk	Tariff charge
Each outgoing trunk	Tariff charge

* Minimum charge would be for 20 incoming in-dial trunks

Centrex-CO - Recurring Monthly Charges

Established Centrex-CO charges (for commercial customers) less the Company's established conventional (flat or measured) PBX extension station charge for the appropriate rate group.

Contingent Termination Liability

It seems desirable that the treatment applied to military-owned installations should be as nearly similar to the handling of commercial cases as may be practicable.

It is, therefore, suggested that in furnishing service on either a Centrex-CU or Centrex-CO basis the service contract should provide for a basic minimum revenue guarantee for a period of three years.

In the event that all or a portion of remaining service (as later defined) is discontinued within three years of the effective contract service date, the customer would pay a portion of the remaining monthly rentals for the unexpired period.

Where Centrex-CU is furnished, the minimum revenue guarantee could be established and applied in the following manner:

1. When service is initially established the minimum revenue guarantee would be based on 90% of the incoming in-dial trunks (rounded to nearest lower whole number).

   For example, if 32 incoming in-dial trunks were furnished at cut-over, the minimum revenue guarantee would be for 28 (= 32 x .90) incoming in-dial trunks. However, the minimum billing would never be for less than 20 incoming in-dial trunks (see above).

If the customer's requirements fall below 28 incoming in-dial trunks at any time during the three years following cut-over, the Company would bill for the minimum guaranteed number for the remainder of the three years.

2. When subsequent growth occurs in the number of incoming in-dial trunks a new minimum revenue guarantee would be established at the time the growth exceeds 5 incoming in-dial trunks.

   For example, assume customer in "1" above grew from 32 to 38 incoming in-dial trunks. When that point was reached a new minimum revenue guarantee was established for a three year period for 34 incoming in-dial trunks (= 38 x .90).

   If the customer's actual trunk requirements drop below 34 incoming in-dial trunks at any time within three years of the last established minimum revenue guarantee date, the Company would bill for 34 incoming in-dial trunks for the remainder of the period.

   This approach is consistent with the principles applied to commercial customers outlined in Section IV - Basic Rate Treatment.

3. If service is completely terminated, the customer would be billed a termination charge computed on the basis of the separate revenue guarantee dates established for each contract (original and subsequent).

   Assume customer totally disconnects service 6 months after the addition in "2" above and that the addition was made two years after cut-over. Customer would then be billed for 6 months' revenue on 28 incoming in-dial trunks and 30 months' revenue on 6 incoming in-dial trunks.

Where Centrex-[illegible] is furnished, the minimum revenue guarantee and contingent termination liability plans would be as outlined for commercial customers in Section IV of this memorandum (less the conventional flat or measured PBX extension station charge for the appropriate rate group).

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Service Connection Charges

As outlined in Section IV, it is proposed that a new schedule of service connection charges should be established for Centrex service.

A similar approach would also seem desirable where military-owned installations are involved.

1. For Centrex-CU, apply standard tariff S.C.C.'s for incoming "listed" number and outgoing trunks. Establish a new schedule of S.C.C.'s for incoming in-dial trunks at higher than existing S.C.C. levels reflecting the same relative increase as suggested for commercial installations.
2. For Centrex-CO, apply the service connection charges on a per main station basis at the commercial S.C.C. levels.

Other Considerations

The provision of Centrex-CU service requires separate trunk groups for each thousand number assignments unless a separate ABX code is assigned for each customer. This separate trunk grouping and the consequent loss of trunk efficiency will result in added costs to the government for certified bases because billing is on a trunk basis.

It is felt that this is a generally unavoidable characteristic of the service being provided and that the charges are justified. It is recommended, however, that local conditions (availability of codes, size of system, etc.) be examined in each such case to see if the assignment of an exclusive code might be justified.

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E193
Exhibit 8C

CERTIFIED MILITARY BASES

Development of Centrex-CU Revenue Requirements - Based on Ohio Factors

Revenue requirements are based on the central office cost information developed for commercial installations (Section III) but exclude cost of facilities furnished by the military.

Also, assumes same statewide mix as commercial installations; i.e., 40% SxS, 20% #5 X-bar (Future) and 40% Common Control (panel, #1 X-bar and #5 X-bar - present).

Centrex-CU Revenue Required Per Main Station Per Month

Serving Central Office	300 M.S.	600 M.S.	1800 M.S.
Step-by-Step	$ *	$ *	$ *
#5 X-bar - Future	0.73	0.85	0.38
Common Control	1.12	1.20	0.67
Weighted Average	0.59	0.65	0.34

* Estimates show no additional costs in the average case where the serving central office is SxS equipment. Savings in central office equipment and land and buildings generally offset increases in other items. However, in a large multi-office metropolitan center with a wide local service area very substantial C.O.E. and O.S.P. costs might be involved. Therefore, each Company, especially those with large proportions of SxS equipment, will want to evaluate the costs which can be anticipated in its area.

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E194
Exhibit 8C

SECTION VII
Attachment 2

DEVELOPMENT OF ILLUSTRATIVE RATE TREATMENT - CENTREX-CU

Assumes charge for in-dialing and out-dialing with station identification features will be appliqued onto incoming in-dial trunks only.

Total monthly revenue required - see Attachment 1:

For 300 main station system	$177.00
" 600 " " "	390.00
" 1800 " " "	612.00

Estimated number of incoming in-dial trunks based on assumptions:

1. Incoming in-dial and "listed" number trunks are equal in number to the outgoing trunks.
2. With 80% of traffic in-dialed the incoming in-dial trunks are 80% of total of all incoming trunks, (in-dial and "listed" number).

Estimated number of incoming in-dial trunks for high C.C.S. system:

For 300 main station system	22 trunks
" 600 " " "	35 "
" 1800 " " "	56 "

Indicated revenue applique per incoming in-dial trunk:

For 300 main station system	$ 8.05
" 600 " " "	11.15
" 1800 " " "	10.95

Suggested monthly charge for Centrex-CU at certified military base located in either flat or message rate exchange is:

Incoming In-Dial Trunk, Each	Tariff plus 12.00 *
Incoming Trunk to Listed Number, Each	Tariff
Outgoing Trunk, Each	Tariff

* Minimum charge is for 20 incoming in-dial trunks.

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E195
Exhibit 8C

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SECTION VIII

PROTECTED

E196
Exhibit 8C

MARKETING CONSIDERATIONS

Salesmen Must Have Full Understanding of Centrex

The importance of salesmen having complete understanding of the Centrex offering can not be overemphasized. Costly mistakes can be made, having adverse effects upon business acceptance of Centrex service, as well as serious reductions in net earnings if improper offerings are made.

In one case a large customer was allowed to elect by departments, whether or not to provide Centrex. Certain departmental heads chose to arrange for this service, while others rejected it. As a result, the public is confused, not knowing whether to in-dial stations or to call the customer's switchboard number.

In another case, a rate commitment was made before all cost data were available. The quoted rates are well below revenue requirements computations.

Selling Skills Can Influence Customer Desires

Certain important customers have bought Centrex service because it is unique, offers prestige, is the "new jet age concept" and allows more flexible out-of-hour arrangements.

Others can be sold because of:

- Better service at all times to their customers.
- Improved attendant working conditions - particularly applies to console operation.
- Flexibility - restricted stations or not, call transfer, identification of outward dialing station, better handling of peak loads.
- Labor savings.
- Speed of service.
- Floor space savings (for Centrex-CO).
- Station-to-station toll calling rather than person-to-person.

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Centrex-CO Versus Centrex-CU

As pointed out in Sections II and IV, the offerings are very nearly the same from the customer's viewpoint, with the exception that an increased charge is made in the case of Centrex-CO to compensate for floor space and power costs. This makes possible offering either Centrex-CO or CU to the customer without going into specific details, generally allowing discretion in providing the one which is economically justified under the particular set of circumstances encountered.

Salesmen should concentrate on selling Centrex service features and not floor space.

To complete the Marketing package in this regard, all possible effort is being directed toward expediting the development and manufacture of ANI for SxS-type PBX's. This will allow more completely the offering of either Centrex-CO or Centrex-CU to any customer with the final decision resting upon the engineering economics as to which should be provided.

Fully-Restricted and Bridged Stations at Lower Rate Than Fully-Mechanized Stations

Generally, large business customers have a need for partially or fully restricted stations and for bridged extensions. In certain cases privately-owned installations are used to provide internal communications, requiring the use of more than one station set.

If bridged stations are priced too low, excess quantities may be used, thereby diluting the service as increased line usage by bridging stations cuts down the capacity for the use of the line in handling incoming calls.

Bridged extensions should be recommended where needed but not over-emphasized just to get more stations.

If fully-restricted stations are priced too low, the customer may be encouraged to deny full telephone service to qualified people who need such service for the good of the business. Also, in the case of Centrex-CO, expensive loops and switching equipment are tied up handling desk-to-desk internal calls. On the other hand, too high a price encourages the provision of separate competitive privately-owned equipment.

Fully-restricted stations should be recommended only where there is a customer need for this limited offering.

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E198
Exhibit 8C

Effect of Mileage Charge for Centrex-CO

In some of the larger central office areas it is necessary to contemplate a mileage charge for Centrex-CO service when the customer is located beyond the normal serving area (see Section V) because of high outside plant cost. In such cases Centrex-CU should generally be sold.

Extra Charges for "QZ" Codes

As a service to the customer, some Companies have established a tariff for a billing arrangement which meets customer needs for "Keep-Cost" accounting data. Codes are used as directed by the customer. These may be changed from time to time and selected stations may use several codes at one time. (See A.T.& T. letter of December 29, 1950, C.L. 1476.)

In the case of #5 X-bar equipment, automatic number identification is available. It should be available on SxS-type PBX equipment later. It is recommended that no separate charge apply for this feature, but that it be built into the Centrex rate, as discussed previously. In some cases, such station identification may suffice for the customer's accounting purposes.

In all cases, either Centrex-CO or Centrex-CU, it seems desirable that "QZ" code billing be offered.

Charges for "QZ" billing should not directly affect Centrex offerings. "QZ" code service would be a common offering, available to those desiring such accounting aid.

Customer Requests for Centrex for Portion of Stations Only

Experience in the case of one large customer, where only a portion of the non-restricted stations were arranged for in-dialing, suggests caution in such an offering. The in-dialing public is confused when it encounters selected stations where in-dialing is possible, yet other attempts to in-dial are intercepted. Such service is somewhat analogous to furnishing both manual and dial service to a city or town.

Sales effort should be directed toward convincing a customer that he should go all-out for Centrex service where this problem is encountered.

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E199
Exhibit 8C

Customer Savings as a Sales Aid

In reviewing various customers' communications needs, these will fall into three categories:

- Customer savings with Centrex will be considerable.
- Customer savings with Centrex will be negligible.
- There will be no savings to the customer.

Customer savings should not be a crutch on which to lean to sell Centrex. It is, of course, a valuable selling point where applicable. It will not always be applicable, and sales effort must be concentrated on the basis of the many other reasons mentioned above.

Attendants' Positions

The new console described in Mr. Mapes' letter of September 20, 1960 is an attractive item offering many excellent sales advantages. However, before offering this unit to a customer, careful analysis with the Engineering and Traffic groups should be completed. For the present there are some features which are not available with console operation.

When appropriate, the console offers advantages, such as:

- Attractive and modern.
- Requires less floor space, mounts on desk or table.
- Attendant may in some cases handle other work.

The alternative to the console will generally be the 608A cord switchboard.

Packaged Rates

With Centrex, the rate structure for business customers is a simple "packaged" arrangement. The station charges include trunks, common equipment and switches. The only other basic charge is for the attendant's position, (console or switchboard).

This concept provides the salesman with an effective, simple and readily understood means of presenting his offering. Instead of studying means for rationalizing the complex trunk, position and common equipment charges and their variations, the salesmen may spend more time in preparing to point out the advantages and conveniences offered to the customer and the improved service possible to the customer's customer.

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E200
Exhibit 8C

Size of Market

All large users (say over 1,000 lines) - business, schools, airlines and industries should be prospects for Centrex service. Perhaps 75% of all 500 to 1,000 line customers could be considered candidates for Centrex at this time and about a fourth of the 100 to 500 line customers.

Some large users might realize savings in the use of Centrex service. Such potential savings taper off rapidly toward the small user, and will probably be non-existent in the case of very small users.

As pointed out above, however, cost savings obtainable with Centrex service are only one area of consideration and not necessarily the controlling one with the customer. The many other advantages, available to any customer regardless of size or traffic characteristics, will offer a wide basis for effective sales effort as time goes on.

Forecast of Sales Capabilities

The Companies may wish to survey the concentrated business areas of downtown locations as well as outlying shopping and industrial projects, to determine if there are possible candidates. Airports, colleges, universities and large businesses or industries requiring new or additional services should be studied for Centrex service.

At the present time complete technical and sales data have not yet been furnished to the Companies, and it may be desirable in many cases to discuss details of the offerings with A.T.& T. Engineering and Marketing people, as appropriate.

Need to Coordinate Introduction of New Services

As in the case of any new offering, coordination is essential on a Systemwide basis. Development work is in a state of flux during the early stages of any new offering and to take full advantage of all economies the Companies will want to maintain close communications on Centrex. In the next few months the first #5 X-bar-type Centrex systems will be activated, using the newest features. These will be studied from an operational viewpoint. Customer reactions will be studied and reports will be made available to the Companies.

E201
Exhibit 8C

New offerings of Centrex tie in with the overall System program for DDD. In some cases the selection of the type of equipment for Centrex may depend on the need for the features of the particular facility for other new offerings, such as Wide Area Telephone Service.

Company construction programs and related Western Electric production will be affected by the uses of #5 X-bar, Step-by-Step, and switchboards and consoles in the Centrex program.

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E202
EXHIBIT 8D
March 28, 1961 letter from R.F. Landry
to General Commercial Managers

Mrs Ely

CENTREX SERVICE - Status Report

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY. NEW YORK 7. N.Y.

MARKETING DEPARTMENT

AREA CODE 212
EX 3-9800

R. F. LANDRY
ASSISTANT VICE PRESIDENT

7c

March 28, 1961

FROTEC

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
8D

Mr. W. B. Ellis
General Commercial Manager
Ches. & Pot. Tel. Co. of West Virginia
Charleston 1, West Virginia

Dear Mr. Ellis:

Centrex is one of the services currently receiving considerable attention interdepartmentally, both in the companies and here at "195". Much of the planning for a System Centrex offering is well advanced. In the process, the very concept of this service has been expanded to the point where we thought it desirable to furnish you with what amounts to a status report on this activity and an up-to-date picture of what this service is, how it can be provided, and how we see it developing in the future.

First; What is Centrex? We like to think of it as a modern mechanized complete communication service for the P.B.X. customer. In addition to direct in-out dialing, the service will provide for station billing (ANI or CAMA), station transfer, intercept and night connections. Centrex is really a means for providing our P.B.X. Customers with basic telephone service, specifically in-out dialing and station billing, which is comparable to the service enjoyed by non-P.B.X. business customers plus the special features required for large installations and generally already available with P.B.X. service.

How will Centrex service be provided? Today's concept contemplates the provision of Centrex service using either regular P.B.X. or #5 crossbar equipment, depending upon the specific conditions involved in each customer case. This varies from the original concept which envisioned Centrex as more or less a form of "special" service available with #5 crossbar equipment only for certain large users normally having some specific need for this kind of service. This form of Centrex using #5 crossbar equipment now serves Dow Chemical in Midland, Michigan, state offices in Los Angeles and Indianapolis and the Air Force Academy at Colorado Springs, and will be used to provide the service now being installed at the Idlewild, O'Hare and Los Angeles airports. The equipment in these cases is located on company owned or leased space and since it is #5 crossbar, the ANI feature is built in. The use of #5 crossbar equipment for Centrex is described in Mr. Mapes' letter of September 20, 1960.

Exhibit 80

Centrex may also be provided using dial P.B.X. equipment located on either company or customer controlled space. This service, which is like that now being provided on many company official boards, is identical to that provided with #5 crossbar equipment from a customer service viewpoint except that station billing is presently available only on a CAMA (operator-identified) basis. We are actively pursuing the provision of ANI on Dial P.B.X. equipment but, as of now, it appears that such a development is at least several years away.

Directly related to the expansion of the Centrex concept to include both #5 crossbar and dial P.B.X. equipment and, more specifically, to the use of both company and customer space for locating equipment has been the development of the terms Centrex-CO and Centrex-CU. These terms, intended for internal use only, have through use become the means to differentiate between service provided by equipment on company controlled space (Centrex-CO) and that provided by equipment located on customer controlled space (Centrex-CU). It should be noted that these terms have no relation to the type of equipment used to provide the service, although in reality it is expected that all #5 crossbar installations will be of the Centrex-CO type.

Another pertinent question is the size of the market for Centrex. This has been the subject of considerable discussion during the past few months and, we feel, has been pretty well resolved at this point. Our overall, long-term objective is to provide modern telephone service to all business users regardless of size or location. It is particularly important that this philosophy apply to the P.B.X. Market. The attainment of this goal represents a real and recognized challenge and raises many questions as to just how we do this and how soon it can be done. We don't have these answers yet, but we view Centrex as a major step toward this objective. The use of both #5 crossbar and regular dial P.B.X. equipment, located on either company or customer space, provides us with a degree of flexibility in terms of both equipment and economics to make Centrex attractive for customers with 300 or more stations. In any case, the market is large because of the numbers of customers involved and because customers like one or more of the prestige, economy and service factors made possible particularly by the direct dialing feature that Centrex offers.

This review of Centrex developments quite naturally raises the question of the relationship between Centrex and the furnishing of In-Dialing alone. The answer seems clear - Centrex will in effect supersede existing In-Dialing offerings. We feel quite strongly that in the long run the medium and large size PBX customer, perhaps 300 or more stations, should in the future be sold full Centrex service.

Finally, there is the problem of meeting the needs of our many smaller PBX customers who have an interest in or requirement for Centrex or a similar service. We are concerned here with the approximately 10,000 Dial PBX's in the range between 40 and 100 stations, many of which represent a need and are good sales prospects for a service of this type. Perhaps something in the nature of a "Junior Grade" Centrex offering can be developed to take care of these customers who may not need detailed station billing on all stations. For example, one solution may be in furnishing station users, in addition to their PBX station lines, direct Central office lines terminated in key telephones where a few stations originate and/or receive the bulk of the outside calls. This arrangement would provide In-Dialing to such station users.

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E204
Exhibit 8D

Also, where Centrex-CO installations are in service, it will often be possible and desirable from both a Company and Customer viewpoint to serve not only one or more large customers from this location, but also to add customers with relatively few stations. This situation may actually prompt the Companies to consider establishing a lower station minimum for Centrex in some locations. Ultimately, of course, the Electronic PBX is expected to contribute a solution to this problem.

As indicated earlier, all departments are and have been active on this project for some time. The Rate letter for Centrex is expected to be sent to the companies in the near future. Also, Engineering is preparing information regarding the provision of Centrex service using regular dial PBX equipment. This will complement the information previously sent to the companies and referred to above, describing the provision of Centrex service using #5 crossbar equipment. A Centrex Marketing Program will be available about mid-year. We will, of course, keep you informed of any future developments as they occur.

We have attached to this letter some additional background information on Centrex which you may find informative. Some of the data in Attachments Band C is based on studies made in 1959. Your cooperation in furnishing revisions and additions, as appropriate, would be appreciated. Such information and any questions you may have on this program may be directed to W. S. Brown, Jr. (212 EX 3-4432) who is coordinating Centrex activity for Marketing.

Yours very truly,

R. F. Landry

Assistant Vice President

Attachments

To Marketing Department Mailing
  List and General Commercial Managers

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E205 ATTACHMENT A
Exhibit 8D

IN-OUT DIALING FOR BUSINESS CUSTOMERS

I. GENERAL

IN-OUT dialing service to P.B.X. customers is expanding rapidly. In an attempt to bring the Companies up-to-date and to obtain assistance in revising the available data relating to offered and completed jobs, this memorandum has been prepared.

II. DEFINITIONS

Certain definitions have been tentatively adopted, following reviews with representatives of various departments and with associated companies, these are:

A. IN-OUT DIALING - SERVICE PERMITTING INCOMING AND OUTGOING CALLS, BOTH LOCAL AND TOLL, TO BE DIALED DIRECTLY TO OR FROM A P.B.X. EXTENSION, WITH OR WITHOUT EXTENSION IDENTIFICATION.

B. CENTREX-CO* - IN-OUT DIALING SERVICE PROVIDED ON A DIRECT LINE BASIS FROM CENTRALIZED SWITCHING EQUIPMENT ON COMPANY PREMISES, USABLE BY ONE OR MORE CUSTOMERS.

C. CENTREX-CU* - IN-OUT DIALING P.B.X. SERVICE PROVIDED FROM SWITCHING EQUIPMENT LOCATED ON THE CUSTOMER'S PREMISES FOR HIS EXCLUSIVE USE.

D. STATIONS
1. - UNRESTRICTED - FULLY MECHANIZED - STATIONS HAVE FULL IN-OUT DIALING PRIVILEGES.
2. - PARTIALLY-RESTRICTED STATIONS HAVE ANY ARRANGEMENT BETWEEN FULLY - AND UNRESTRICTED STATIONS.
3. - FULLY-RESTRICTED STATIONS HAVING INTRA-P.B.X. DIALING PRIVILEGES ONLY. NO POSSIBILITY OF COMPLETING CALLS THROUGH SWITCHBOARD.

* NAMES COMMITTEE WORKING ON APPROPRIATE TERMINOLOGY

III. WHAT'S NEW AND WHO IS BUYING?

Mr. Mapes letter of September 20, 1960 reviewed in detail the use of #5 Crossbar System for Centrex service. One unique and attractive feature readily available with the use of #5 crossbar equipment is Automatic Station Number Identification. Several operating companies have already presented offerings to customers for furnishing Centrex service using #5 crossbar and some of these have been activated. Almost fifty cases are under consideration. These are summarized in Attachment B.

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ATTACHMENT A

E206
Exhibit 8D

Engineering information relating to the use of the dial P.B.X. equipment for IN-OUT dialing is under consideration and should be released to the companies early this year. Station identification using dial P.B.X. equipment is available by giving these data to either the CAMA (where available) or Toll operator. Future plans provide for Automatic Number Identification for use with SXS dialing facilities which will be applicable with the usual P.B.X. equipment. Some IN-DIALING offerings and installations are summarized in Attachment C. (This list is based on data furnished in 1959. It is hoped that revision and additions will be furnished by the Companies to up-date the list and complete station data where not given or where these are incomplete.) For the present, questions relating to the application of dial P.B.X. equipment can be handled directly with Engineering, or routed through Marketing.

IV. WHAT ABOUT RATES?

In conferences, held on September 28-29, Nov. 9-10 & Dec. 22 considerable discussion was devoted to certain fundamental premises relating to rate proposals. Companies represented in the meetings cooperated in solving specific problems, exchanging ideas with each other and also with the Companies not represented at the meeting, to insure getting a well-rounded System viewpoint upon which to base their recommendations, which are to be included in a letter to be released to the Companies at an early date.

V. ENGINEERING INFORMATION

It appears at this time that a "bringing-up-to-date" of the "Notes on Direct Dialing To and From P.B.X. Extensions", (which is in good standing and copies of the present issue are still available), together with folding in the essential parts of Mr. Mapes letter of September 20, 1960, relating to Centrex, and subsequent engineering material, expected early this year, specifically relating to use of dial P.B.X. equipment for Centrex service, will be adequate to present the Engineering picture for the present. As always, such developments are in a constant state of flux. Summarizing these data at this time in the light of presently known developments and techniques should be satisfactory. Necessary revisions can be made from time-to-time as we progress toward a complete Marketing presentation.

VI. AVAILABILITY OF AUTOMATIC NUMBER IDENTIFICATION FOR SXS

Automatic Number Identification, for outgoing calls, available now on #5, is being considered for development for use with dial P.B.X. equipment. The status of this development work is under constant review between the Engineering Department and the Bell Telephone Laboratories. We are after the earliest possible date for making this feature available.

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VII. SALES TRAINING PACKAGE

It is anticipated that special training will be required to prepare our Salesmen to handle this service and this is under consideration.

VIII. MARKET PROGRAM

Plans include the preparation of a complete market program sixilar to the Hotel-Motel and other package presentations.

IX. UNIVERSITY AND COLLEGE OFFERINGS

Much activity is centered around IN-OUT dialing to dormitory space, a service which has become attractive with the provision of Automatic Number Identification. These are being co-ordinated by the Sales Programs Supervisor. A brochure covering the Michigan State University offering was sent to the Companies on Dec. 28, 1960.

X. AIRPORT SERVICE

Three major Airports (New York - Idlewild, Chicago - O'Hare and Los Angeles - International) are studying Centrex offerings. Information relating to the Idlewild offering was released to the companies in Mr. Damkroger's letter dated Dec. 15, 1960.

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E208

EXHIBIT 9

March 24, 1961 letter from C.N. Ostergren
to Chief Engineers

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK 7, N.Y.

AREA CODE 212
EX 3-9800

C. N. OSTERGREN
DIRECTOR OF ENGINEERING ECONOMICS

March 24, 1961

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

We have prepared the attached booklet detailing a method of developing cost data for Centrex service, which we hope will be of assistance in the preparation of any studies of this service you may wish to make in your Company. Representative System data have been used in the illustrations, but it is recognized that each area will wish to apply its own specific data for such items as traffic characteristics, plant layouts, etc., in working up its revenue requirements studies.

I am sending you three copies of this booklet which should be sufficient for the people in your department who will be making Centrex studies. An extra copy has been included for your Commercial Department.

If you have any questions concerning this study, Mr. F. H. Klabouch on 212 EX 3-2298 will be glad to discuss them with you.

Yours very truly,

C. N. Ostergren

Attachment
4 Copies of Centrex Booklet

To Chief Engineers

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E209
EXHIBIT 10
April 28, 1961 letter from H.L. Kertz to
Operating and Marketing Vice Presidents

Centrex Service (In-Out Dialing for Business Customers) - Rate Principles and Illustrative Rate Treatment

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK 7, N.Y.

AREA CODE 212
EX 3-9800

H. L. KERTZ
ASSISTANT VICE PRESIDENT

April 28, 1961

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
10

Mr. P. M. Zorn
Vice President & General Manager
So. New England Telephone Company
New Haven 6, Connecticut

Dear Mr. Zorn:

I know you will be very much interested in the attached material we are sending to General Commercial Managers today to assist in finalizing rate treatment for Centrex Service.

As you will recognize, this material incorporates the principles we discussed at the Operating Conference in February. Recalling the general acceptance reflected there, it would seem that we can anticipate the consistent approach among the Companies which we all agreed was so vital in a basic service offering of this sort.

It would be hard to overemphasize how important it is that all departments having anything to do with Centrex Service understand and act in conformity with the fundamental principles on which the rate treatment is based, as outlined in the attached material. You will no doubt wish to take a personal interest in seeing that this is accomplished.

Very truly yours,

H L Kertz

Assistant Vice President

Attachments
Letter and Notes

To all Operating and
Marketing Vice Presidents

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E210
EXHIBIT 11
Binder, "Centrex - Development of
Monthly Revenue Requirements"

C9530

CENTREX

DEVELOPMENT OF MONTHLY REVENUE REQUIREMENTS

MARCH 1961

USA 33a - 475
(ED. 4-23-71)

PLAINTIFF

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

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FPI-MI—9-24-75-50M-4417

AMERICAN TELEPHONE & TELEGRAPH CO.
ENGINEERING DEPARTMENT
NEW YORK

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PRINTED IN U.S.A.

E211
Exhibit 11

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E212

Exhibit 11

DESCRIPTION OF CENTREX OFFERING

Although it is visualized that the basic service to be offered to the public will be called "Centrex," for general internal purposes and in this discussion the terms Centrex CU and Centrex CO will be used. The two versions of Centrex will ultimately provide customers with identical services. The Centrex CU and Centrex CO offerings can be briefly described as follows:

Centrex CU

Will perform all of the basic services available with conventional dial P.B.X.'s.

Direct Inward Dialing is also provided as well as the identification of the calling station (except bridged stations) on all outward calls.

> Outgoing toll calls will be identified and billed by 2L + 5N station numbers. Since automatic identification of the calling station (ANI) is not yet available for Centrex CU service, the station number must be passed verbally to a Telco operator.

> Extension code billing (using "QZ" codes) can be provided in lieu of or in addition to station number billing but established tariff rates for this service (see A.T.& T. letter, C.L. 1476, December 29, 1959) would be applicable.

Switching equipment, as with conventional dial P.B.X.'s, will be located on the customers' premises.

> This means that the customer will supply power to operate the equipment. It will also permit combining of Centrex and conventional P.B.X. operations for the same customer without the need for tie lines, since the two services would be served from the same equipment installation. Complete Centrex service desirably should, however, be sold whenever possible.

Although some special features will carry specific charges, it is proposed that the station transfer, intercept, and night connection features be included as part of the basic Centrex package.

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E213
Exhibit 11

> The customer will have a choice of machine intercept or attendant intercept. The former will be provided without charge supervision. With attendant intercept, however, the ability to pass intelligence between the attendant and the calling party makes it necessary to apply charge supervision.

Centrex CU service will use 701A P.B.X. equipment on the customers' premises, working through S x S central offices; X-bar tandem in combination with Panel, #5 X-bar or #1 X-bar; or the new #5 X-bar with tandem features. There are other possibilities for the future involving X-bar on customer premises and also ECO's.

Centrex CO

This offering is very similar (almost identical in fundamental service features) to the Centrex CU. The principal differences are:

> The calling station will be identified automatically; there will be no need for the station user to pass his 2L + 5N number verbally.
>
> > At the present time Centrex CO service is being provided only through #5 X-bar equipment. It is hoped that ANI will be available for S x S PBX equipment by the time Centrex CO through centralized 701's becomes a reality.
>
> All switching equipment will be located on Telco premises (central office building or space rented by the Telephone Company).
>
> > If, therefore, a customer wanted a mixture of Centrex CO and conventional dial P.B.X. service, the conventional stations would have to be treated as they would be treated if they were at a satellite location, even though they were actually on the same premises as the Centrex stations. The resulting need for tie lines and the lack of uniformity in intercom dialing methods make it undesirable to serve mixed systems on a Centrex-CO basis.

Although they have not all been enumerated, the similarities between Centrex CU and Centrex CO (considering also features common to conventional P.B.X.'s) far outweigh the differences.

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E214
Exhibit 11

BASIC STUDY CONSIDERATIONS

This booklet outlines a method of developing costs and revenue requirements for Centrex service using #5 X-Bar central offices or step-by-step PBX's. Although this outline is not intended as an equipment engineering guide, specific components of the central office and P.B.X. equipment are analyzed to determine the costs of this new service. The costs of the various equipment components are for an average size office with average capacity fills, but they are applied to the specific traffic usage estimated for Centrex stations.

The following are important conditions which form the basis for a Centrex study. Any one of these if not met would increase the cost of providing Centrex service.

1. A #5 X-Bar central office must be economically located from a wire center standpoint. Placing an office near a customer to shorten station loops may result in increased cost of trunk plant and the advancement of new trunk groups.
2. In order to make economical use of some of the equipment required in a #5 X-Bar Centrex office there should be a minimum expectation of 1,000 to 2,000 Centrex main stations. The design of the transfer feature requires that either all incoming trunks be equipped for transfer or separate groups of incoming trunks be provided. Originating registers in existing offices require modification or subgrouping. The costs associated with these and other arrangements make a bottom limit necessary.

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3. The offering of Centrex service must not result in the displacement of existing step-by-step PBX's. We have about $600 million invested in existing dial PBX equipment. It is in the interest of the telephone-using public as well as our business that the revenue-producing value of these investments be preserved. Any such premature displacement would have to be reflected in the #5 X-Bar Centrex-CO revenue requirements, especially in view of the fact that existing step-by-step PBX's are adaptable to Centrex service.

4. Similarly, we have large investments in central office facilities of a variety of types. One way or another, we can adapt them to furnish the basic features of Centrex.

All data used in this study are based on System averages and do not necessarily pertain to any individual company. It is recognized that the plant layouts throughout the System vary greatly. For this study certain typical layouts had to be assumed especially in the case of Centrex service using step-by-step PBX's.

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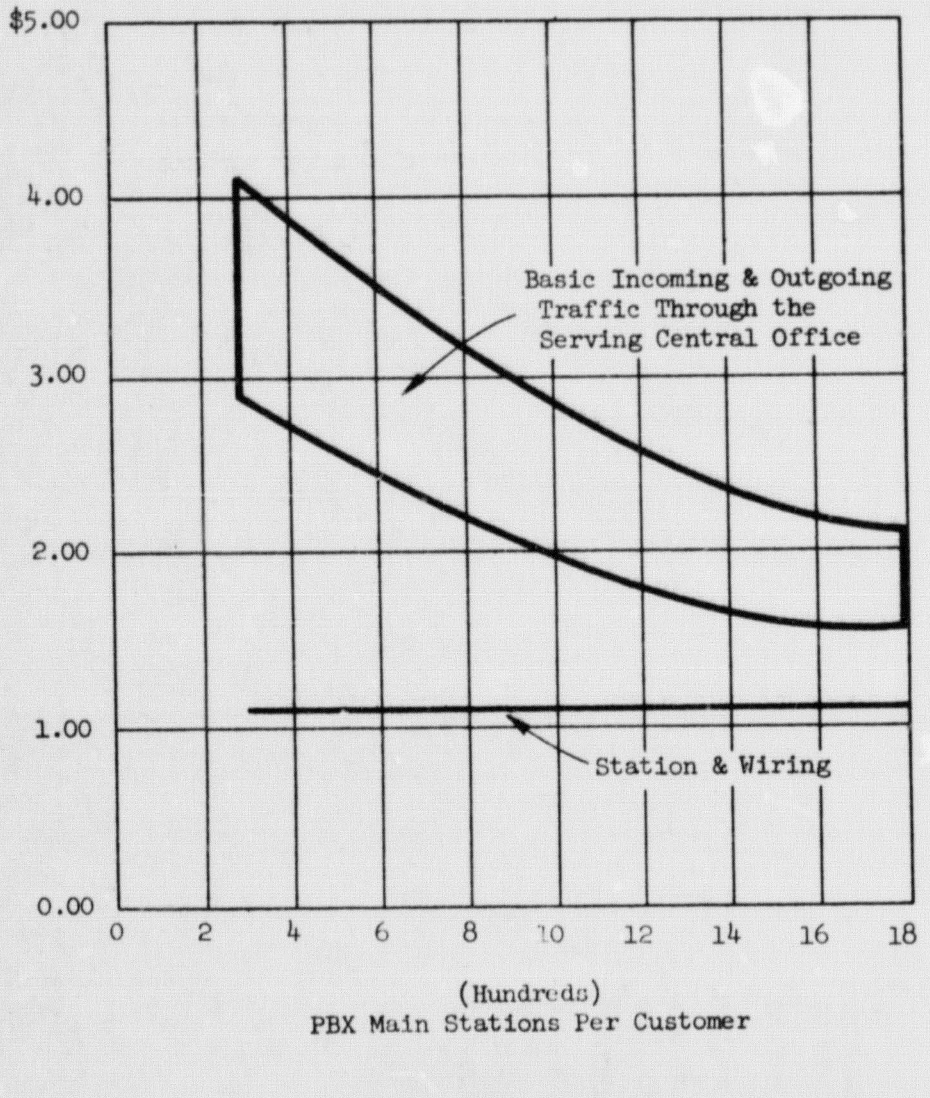
E216
Exhibit 11

GRAPH I

LOCAL PLANT TO HANDLE BASIC INC. & OUTG. TRAFFIC
Excludes Out. Plt. Pairs from Customer to Serving C. O.
Common to Centrex-co & Centrex-cu

Monthly Revenue Requirements Per PBX Main Station



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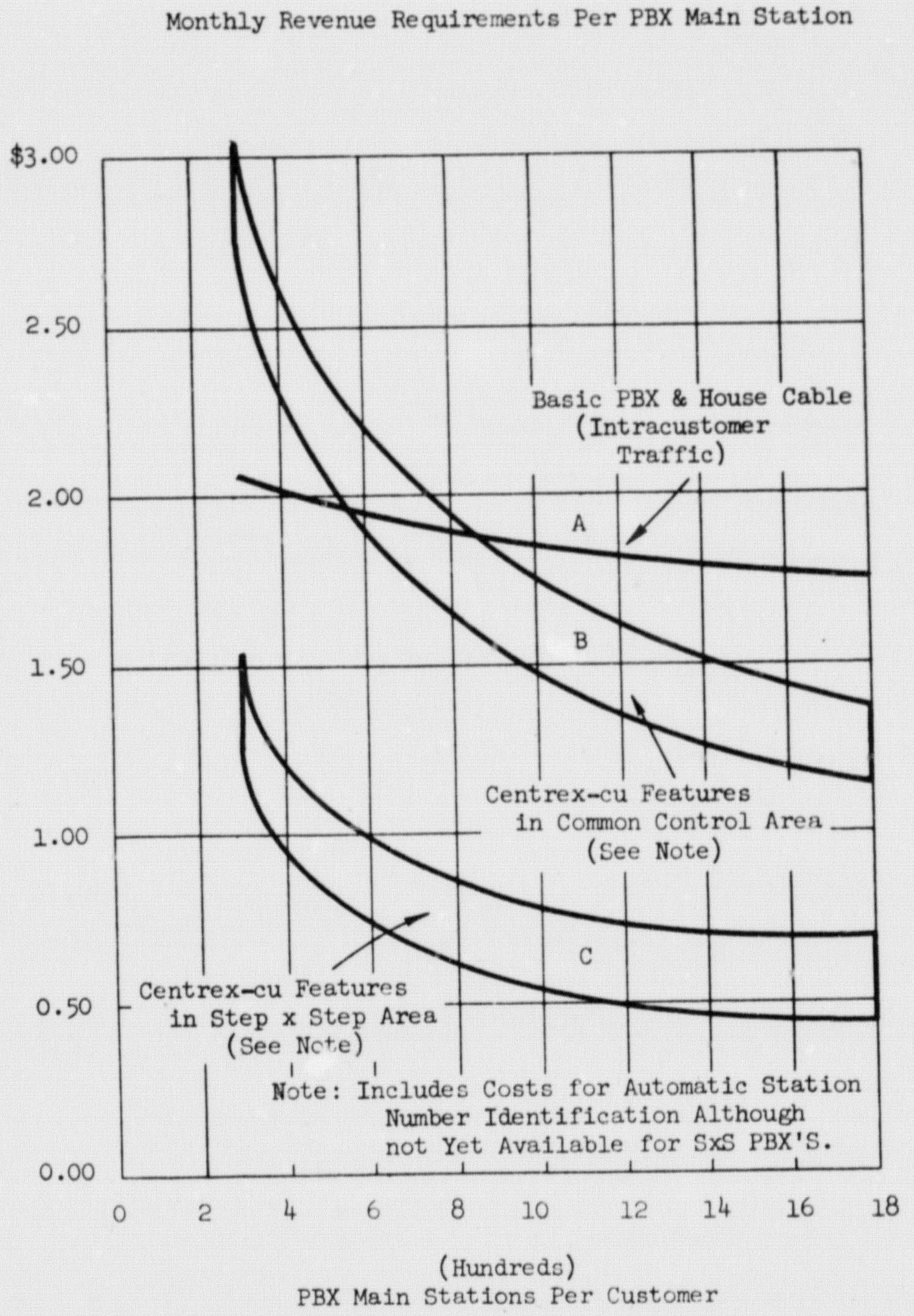
E217
Exhibit 11

GRAPH II

PLANT TO HANDLE CENTREX & INTRACUSTOMER TRAFFIC
Excludes Out. Plt. Pairs from Customer to Serving C.O.
Centrex-cu



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GRAPH III

SUMMARY
PLANT TO HANDLE CENTREX PLUS INTRACUSTOMER TRAFFIC
Excludes Out. Plt. Pairs from Customer to Serving C. O.
Centrex-co & Centrex-cu

Monthly Revenue Requirements Per PBX Main Station

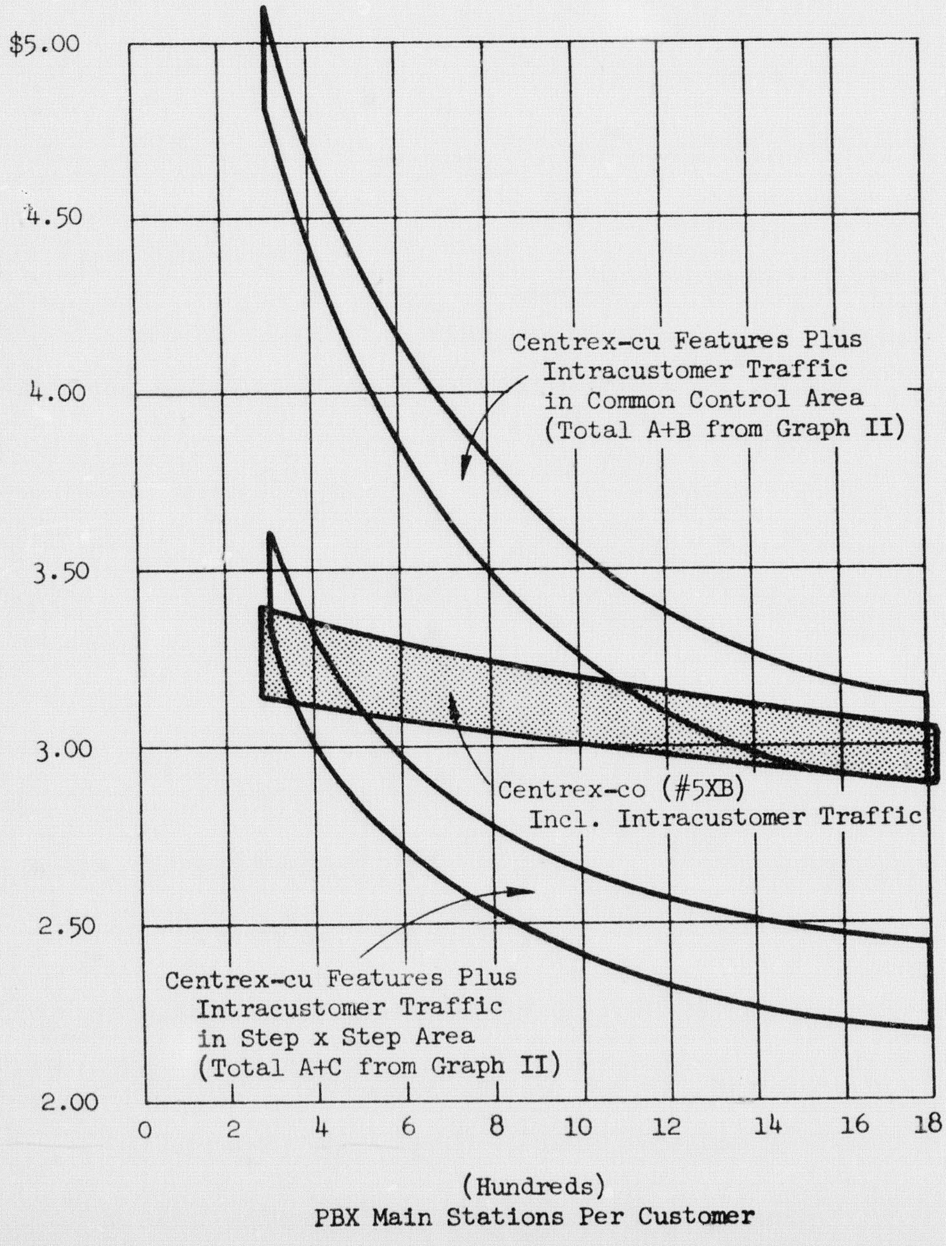

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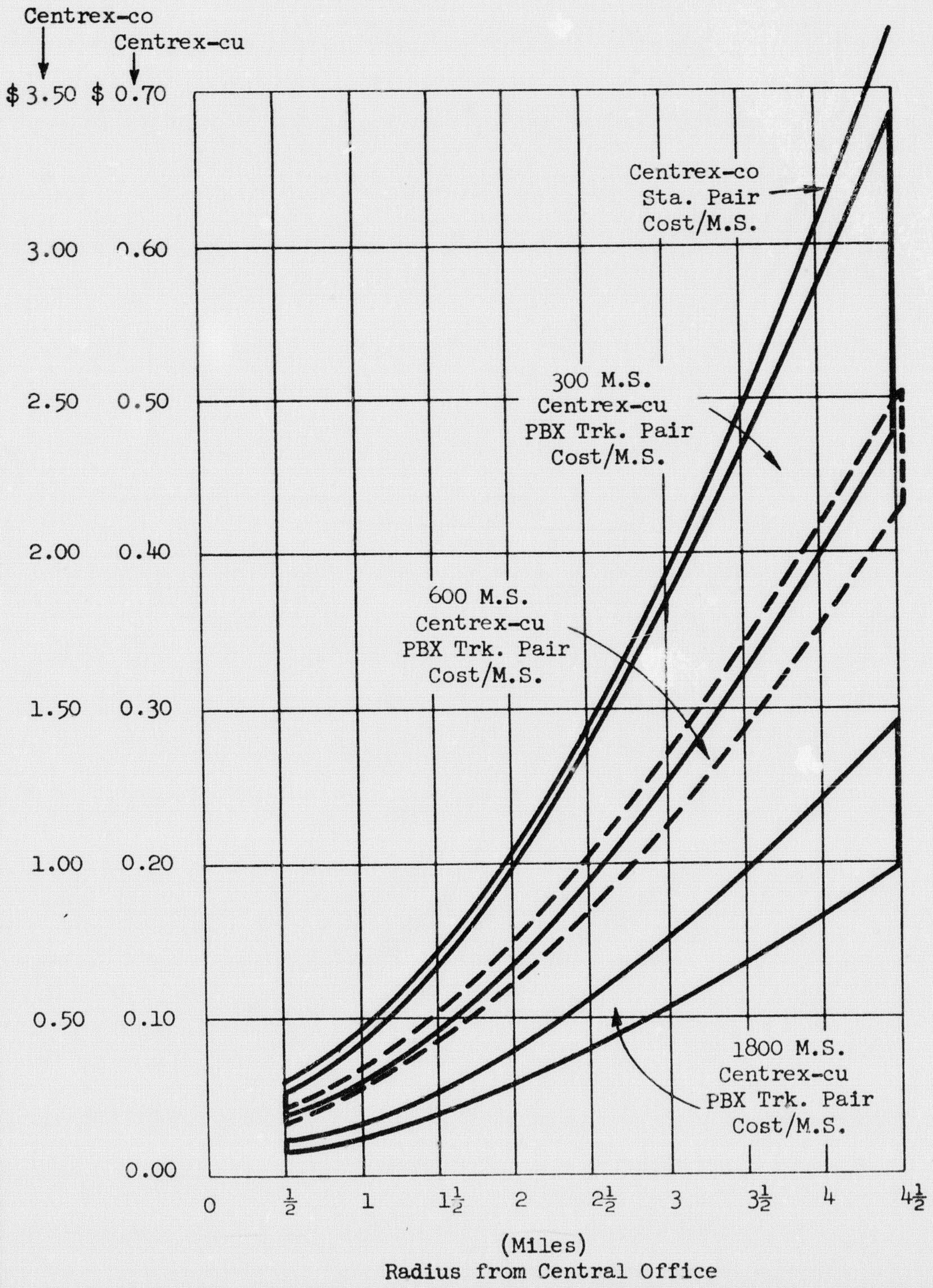
Exhibit 11

GRAPH IV

OUTSIDE PLANT CIRCUITS
From Customer To Serving Central Office

Monthly Revenue Requirements Per PBX Main Station

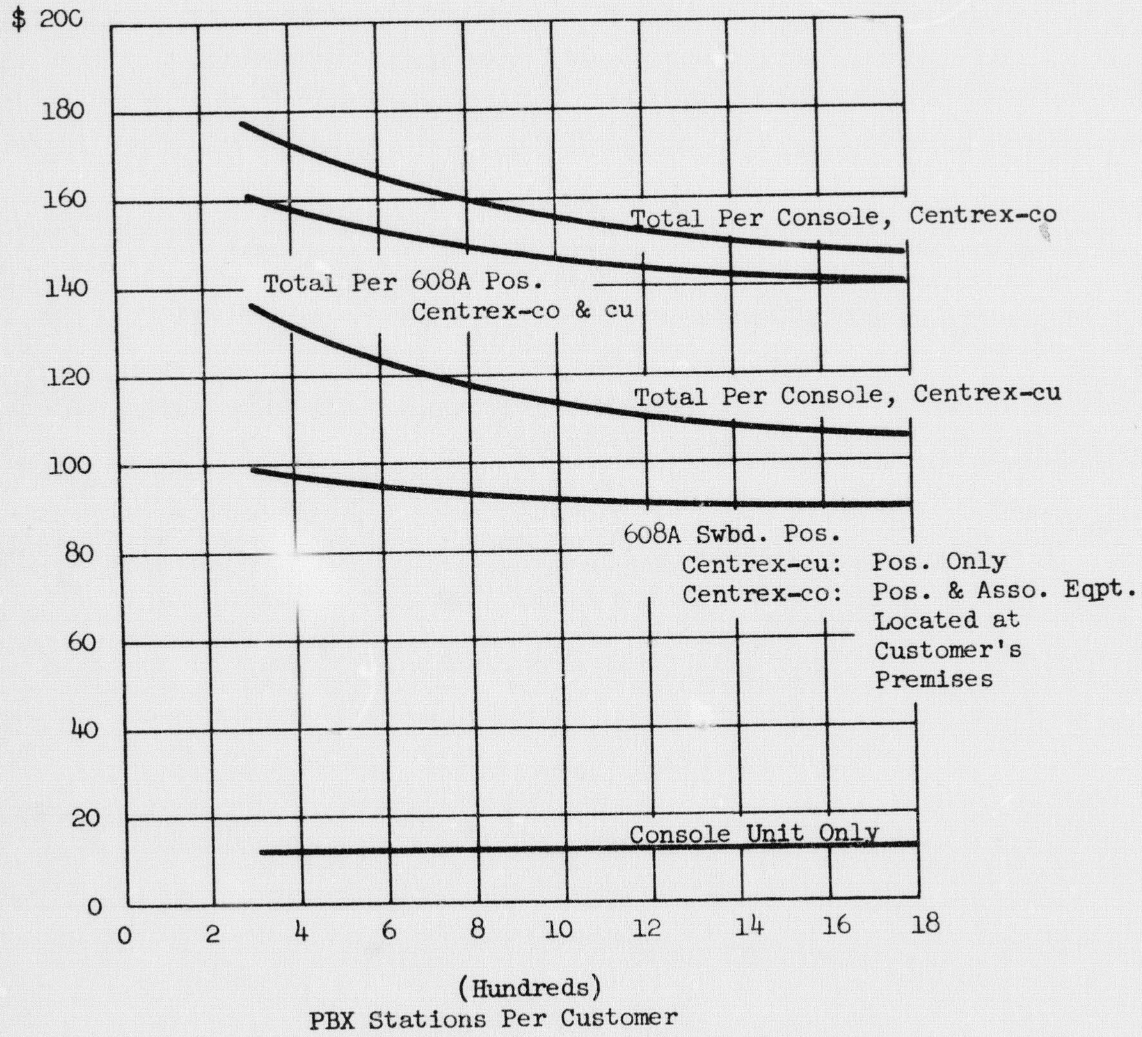


GRAPH V

E220
Exhibit 11

ATTENDANT UNIT AND Associated Control Equipment

Monthly Revenue Requirements Per Console Or Position



Note: About 35 O.P. Pairs are Required Per Centrex-co Console
About 15 O.P. Pairs are Required Per Centrex-co Swbd. Pos.
Use O.P. Pair Costs for Various Lengths from
Centrex-co Curve on Graph IV

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Exhibit 11

EXPLANATION OF GRAPHS

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Graph I

CENTREX - CO

This graph covers the basic monthly local plant costs per main station necessary to handle incoming and outgoing traffic. These are exclusive of the outside plant loops between the CO and the customer. They are the central office and station costs common to any Centrex arrangement. Typical data underlying this graph may be found on pages 16, 17 and 25.

CENTREX - CU

The data on Graph I are common to both CO and CU. The basic incoming and outgoing switching cost together with outside plant loops (not included on graph) are the components of conventional P.B.X. trunk costs.

Graph II

CENTREX - CO

Not related to Centrex - Co service.

CENTREX - CU

This graph illustrates the monthly revenue requirements per P.B.X. main station necessary to cover the cost of Centrex and intracustomer traffic exclusive of central office trunks and attendant consoles. ANI although not yet available has been included in these costs. Underlying data may be found on pages 34, 35, 36, 37, 40, 41, 42 and 46.

Graph III

CENTREX - CO

This graph illustrates the monthly revenue requirements per main station necessary to cover the cost of intracustomer traffic and Centrex features exclusive of outside plant loops between the CO and the customer. Also excluded are costs relating to attendant consoles and associated equipment. Typical underlying data may be found on pages 16, 18 and 25.

CENTREX - CU

This graph summarizes the two Centrex - CU components found on Graph II.

Graph IV

CENTREX - CO

This graph is designed to relate outside plant costs to the distance from the central office. The radii indicated are to the periphery of serving areas and the costs are for the assumed average loop within these areas. Underlying data may be found on page 26.

CENTREX - CU

Covers the cost of trunk loops expressed in terms of per P.B.X. main station for various size P.B.X.'s. These costs are plotted for various distances from the CO. Data for this graph may be found on page 47.

Graph V

CENTREX - CO

Is illustrative of attendant console and switchboard costs including associated central office but exclusive of outside plant. Underlying data may be found on pages 27 and 29.

CENTREX - CU

Illustrates attendant console and 608 Swbd. costs exclusive of trunking. Data may be found on pages 49 and 51.

GENERAL

1. Several of the illustrations indicate upper and lower limits for a given set of circumstances. These are not extreme limits but are averages of high calling characteristics and low calling characteristics throughout the Bell System and are designed to indicate a probable range. Similar plots for an area should be single lines only.
2. The study is designed to return 8% on net investment over the life of the plant.

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E223
Exhibit 11

3. No consideration was given to the effect of staggered busy hours among the Centrex customers. The major effect of this would be to lower the costs for basic incoming and outgoing switching. This becomes a very elusive factor to determine since it depends on the number and variety of customers involved.

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Exhibit 11

TYPICAL DERIVATION

OF

REVENUE REQUIREMENTS FOR #5XB CENTREX CO

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GENERAL

This section presents a method of developing revenue requirements for Centrex - CO using #5 X-Bar.

Revenue requirements at current cost levels are included for:

A. Basic Service

  1. Incoming and outgoing traffic normally handled in local serving office. This data is also used in developing revenue requirements for Centrex - CU.

  2. Station and Wiring

B. Centrex - CO Service

  1. Intracustomer Traffic

  2. Transfer Feature

  3. Automatic Station Identification

  4. Intercept Service

C. Attendant Facilities

  1. Consoles and Switchboards

Centrex - CO is a "Package" consisting of:

1. Direct inward dialing of calls to extension numbers. (DID)

   a. Each extension station to have a seven digit station number (either 2L-5N or ANC).

   b. Calls dialed in to be standard 7 pull (10 pull).

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Exhibit 11

2. Outward dialing by extensions of toll calls with individual station number identification with LAMA. (10D).

3. Transfer of incoming calls is a basic requirement with DID.
   a. Requires equipping all incoming trunks to the #5 X-Bar office with transfer or
   b. Requires splitting trunk groups into Centrex and Non-Centrex incoming trunks and equipping only the Centrex trunks for transfer.

4. Vacant Number intercept arrangements also are a basic requirement with Centrex. A #7A Recorded Announcement system is provided for each individual customer.

NOTE: Intracustomer calls will be made using 4 or 5 digits.

Revenue requirements for "touch-tone" equipment at the #5 X-Bar office have not been included. For touch-tone dialing from the attendants' consoles or switchboards associated with Centrex-CO #5 X-Bar service this equipment, M.F. receiving and converting components of the originating registers, will have to be provided in advance of general touch-tone service.

The in plant costs at about $600 per originating register would amount to $3,600 for 2000 main stations served by 10 consoles or switchboard positions. Loaded with land and building costs and using a 28% annual charge rate this would equate to expenses of $100 per month - $0.05 per station or $10.00 per attendant position.

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Exhibit 11

#5 X-BAR CENTREX
INVESTMENT AND REVENUE REQUIREMENT
EXCLUDING ATTENDANT CONSOLE AND STATION LOOP

300 MAIN STATION CUSTOMER

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	Per #5 X-Bar Centrex Main Station		
	Incoming & Outgoing	Intra Customer Transfer & Auto. Sta. Ident.	Total (Incl. Sta.)
CENTRAL OFFICE EQUIPMENT			
Completing Markers	$ 15.65	$ 16.40	
Dial Tone Markers	1.80	3.20	
Incoming Registers	11.60	3.00	
Originating Registers			
Dial Pulse	8.70	10.20	
Multifrequency	-	1.10	
Outgoing Senders	6.35	-	
Line & Trunk Links	46.00	45.80	
No. Group Appearance	-	6.00	
AMA Translator Appearance	-	2.00	
Trunk Relay Equipment			
Incoming Trunks	16.20	-	
Outgoing Trunks	27.00	-	
Transfer Feature on Inc. Trks.	-	26.50	
Intraoffice Trunks	-	10.00	
#7A Accorded Announcement System		3.00	
Total Central Office Equipment Invest.	$133.30	$127.20	$260.50
% Annual Carrying Charge	28%	28%	28%
Central Office Equip. Annual Charges	$ 37.35	$ 35.60	$ 72.95
LAND & BUILDING (20% OF C.O.E.)			
Total Land & Building Investment	$ 26.65	$ 25.45	$ 52.10
% Annual Carrying Charge	24%	24%	24%
Land & Building Annual Charges	$ 6.40	$ 6.10	$ 12.50
OUTSIDE PLANT (INTERLOCAL TRUNKS)			
Total Outside Plant Investment	$ 19.90		$ 19.90
% Annual Carrying Charge	26%		26%
Outside Plant Annual Charges	$ 5.15		$ 5.15
STATION EQUIPMENT			
Total Station Apparatus & Conn. Inv.			$ 30.00
% Annual Carrying Charge			43%
Station Apparatus & Conn. Annual Charges			$ 12.90
Total Investment	$179.85	$152.65	$362.50
Total Rev. Req. (Annual Charges)	$ 48.90	$ 41.70	$103.50
Monthly Revenue Requirement	$ 4.10	$ 3.45	$ 8.65

E228
Exhibit 11

#5 X-BAR C.O. EQUIPMENT COSTS

INCOMING & OUTGOING TRAFFIC

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	Busy Hour Call Rate Per Main Sta.		Cost Per M.S.
COMPLETING MARKER		*	@ $8.80/Att.
Incoming			
To Station w/o Transfer	0.89	0.67	$ 5.90
To Station w/ Transfer		0.035	.30
To Attendant w/o Transfer		0.175	1.55
To Attendant w/ Transfer		0.01	0.10
Outgoing			
Dial "9"	0.89	0.80	7.00
Dial "0"		0.09	0.80
Total			$15.65
DIAL TONE MARKER			@ $2.00/Att.
Incoming		-	-
Outgoing			
Dial "9"	0.89	0.80	1.60
Dial "0"		0.09	.20
Total			$ 1.80
INCOMING REGISTER			@ $13.00/Att.
Incoming			
To Station w/o Transfer	0.89	0.67	8.70
To Station w/ Transfer		0.035	.45
To Attendant w/o Transfer		0.175	2.30
To Attendant w/ Transfer		0.01	.15
Outgoing		-	-
Total			$11.60
ORIGINATING REGISTER (DIAL PULSE)			@ $9.75/Att.
Incoming		-	-
Outgoing			
Dial "9"	0.89	0.80	7.80
Dial "0"		0.09	.90
Total			$ 8.70
OUTGOING SENDER (M.F.)			@ $7.10/Att.
Incoming		-	-
Outgoing			
Dial "9"	0.89	0.80	5.70
Dial "0"		0.09	.65
Total			$ 6.35

	Busy Hour CCS Per Main Sta.	Cost Per M.S.
LINE & TRUNK LINK FRAME		
Incoming	1.675	
Outgoing	1.675	
Total	3.35	$46.00

* Break-down of incoming and outgoing calling rates shown as used for subsequent calculations.

E229
Exhibit 11

#5 X-BAR C.O. EQUIPMENT COSTS

INTRACUSTOMER, TRANSFER & DIRECT. NO. TRAFFIC

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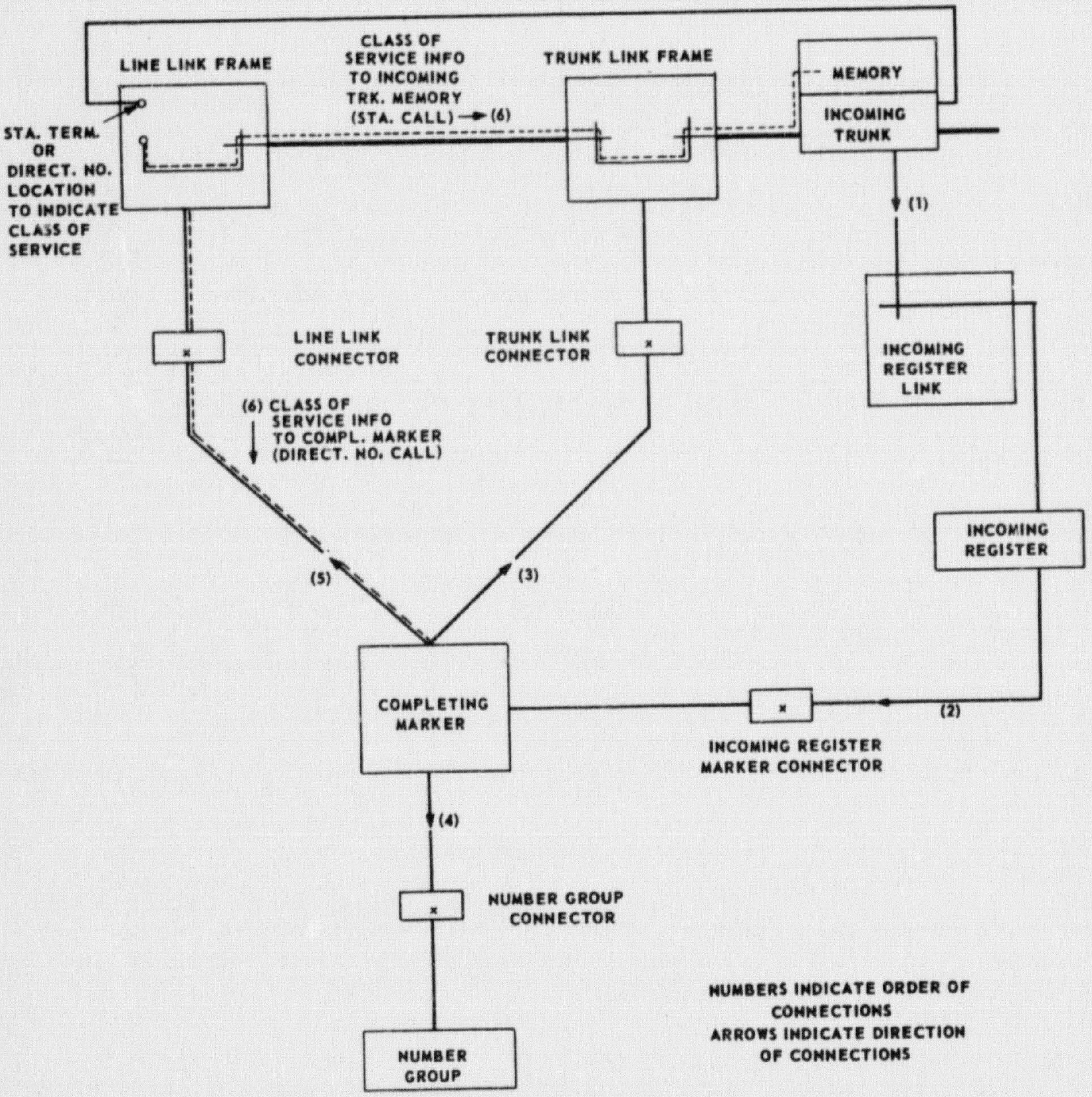
	Busy Hour Call Rate Per Main Sta.	Addn'l. Usage	Cost Per Call	Addn'l. Cost Per M.S. For Cust. Group Service
COMPLETING MARKER			● $8.80/Att.	
Incoming				
To Station w/ Transfer	0.035	2	$17.60	$ 0.60
To Attendant w/o Transfer	0.175	1	8.80	1.55
To Attendant w/ Transfer	0.01	3	26.40	0.25
Outgoing				
Dial "O"	0.09	1	8.80	0.80
Intracustomer Group				
Station to Station	1.50	1	8.80	13.20
Total				$16.40
DIAL TONE MARKER			● $2.00/Att.	
Outgoing				
Dial "O"	0.09	1	2.00	0.20
Intracustomer Group				
Station to Station	1.50	1	2.00	3.00
Total				$ 3.20
INCOMING REGISTER			● $13.00/Att.	
Incoming				
To Station w/ Transfer	0.035	1	13.00	0.45
To Attendant w/ Transfer	0.01	2	26.00	0.25
To Attendant w/o Transfer	0.175	1	13.00	2.30
Total				$ 3.00
ORIGINATING REGISTER			● $ 6.80/Att.	
Dial Pulse				
Intracustomer Group				
Station to Station	1.50	1	6.80	10.20
Multifrequency			● $12.35/Att.	
Outgoing				
Dial "O"	0.09	1	12.35	1.10
Total				$11.30

	Busy Hour CCS Per Main Sta.	Cost Per CCS	Addn'l. Cost Per M.S.
LINE & TRUNK LINK FRAME		● $13.75/CCS	
Incoming			
Transfer	0.018		
Directory No.	0.089		
Outgoing			
Dial "O"	0.234		
Intracustomer Group			
Station to Station	1.500 x 2 = 3.000		
Total	3.341	13.75	$45.80

E230
Exhibit 11

BASIC INCOMING CALL

COMPLETED TO STATION OR DIRECTORY NUMBER LINE LINK LOCATION


LINE LINK FRAME
CLASS OF SERVICE INFO TO INCOMING TRK. MEMORY (STA. CALL) → (6)
TRUNK LINK FRAME
MEMORY
INCOMING TRUNK
STA. TERM. OR DIRECT. NO. LOCATION TO INDICATE CLASS OF SERVICE
(1)
INCOMING REGISTER LINK
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
(6) CLASS OF SERVICE INFO TO COMPL. MARKER (DIRECT. NO. CALL)
INCOMING REGISTER
(5)
(3)
COMPLETING MARKER
(2)
INCOMING REGISTER MARKER CONNECTOR
(4)
NUMBER GROUP CONNECTOR
NUMBER GROUP

NUMBERS INDICATE ORDER OF CONNECTIONS
ARROWS INDICATE DIRECTION OF CONNECTIONS

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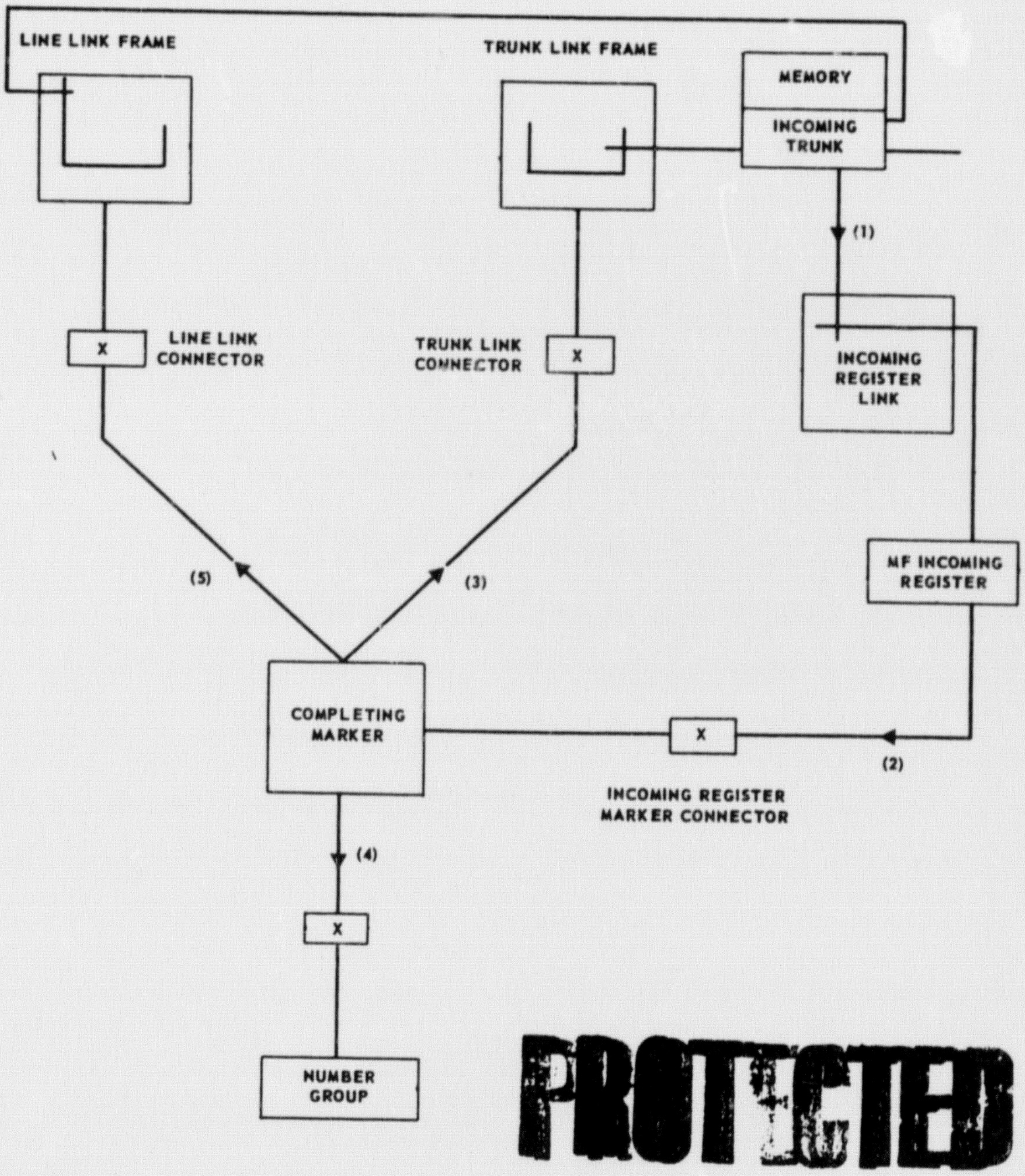
E231
Exhibit 11

PREPARATIONS SETTING-UP A TRANSFER OR DIRECTORY NUMBER CALL

FOLLOWS COMPLETION OF BASIC INCOMING CALL


LINE LINK FRAME
TRUNK LINK FRAME
MEMORY
INCOMING TRUNK
(1)
INCOMING REGISTER LINK
X
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
X
MF INCOMING REGISTER
(5)
(3)
COMPLETING MARKER
X
(2)
INCOMING REGISTER MARKER CONNECTOR
(4)
X
NUMBER GROUP

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(1) (2) INCOMING TRUNK SEIZES MF INCOMING REGISTER TO TELL MARKER THAT CALL IS "TRANSFER" OR "DIRECTORY NUMBER." INCOMING REGISTER GIVES MARKER TRUNK LINK LOCATION OF INC. TRUNK.

(3) MARKER GOES TO INCOMING TRUNK TO DETERMINE CUSTOMER INVOLVED.

(4) MARKER GOES TO NUMBER GROUP TO LOCATE LINE LINK FRAME APPEARANCE OF INCOMING TRUNK.

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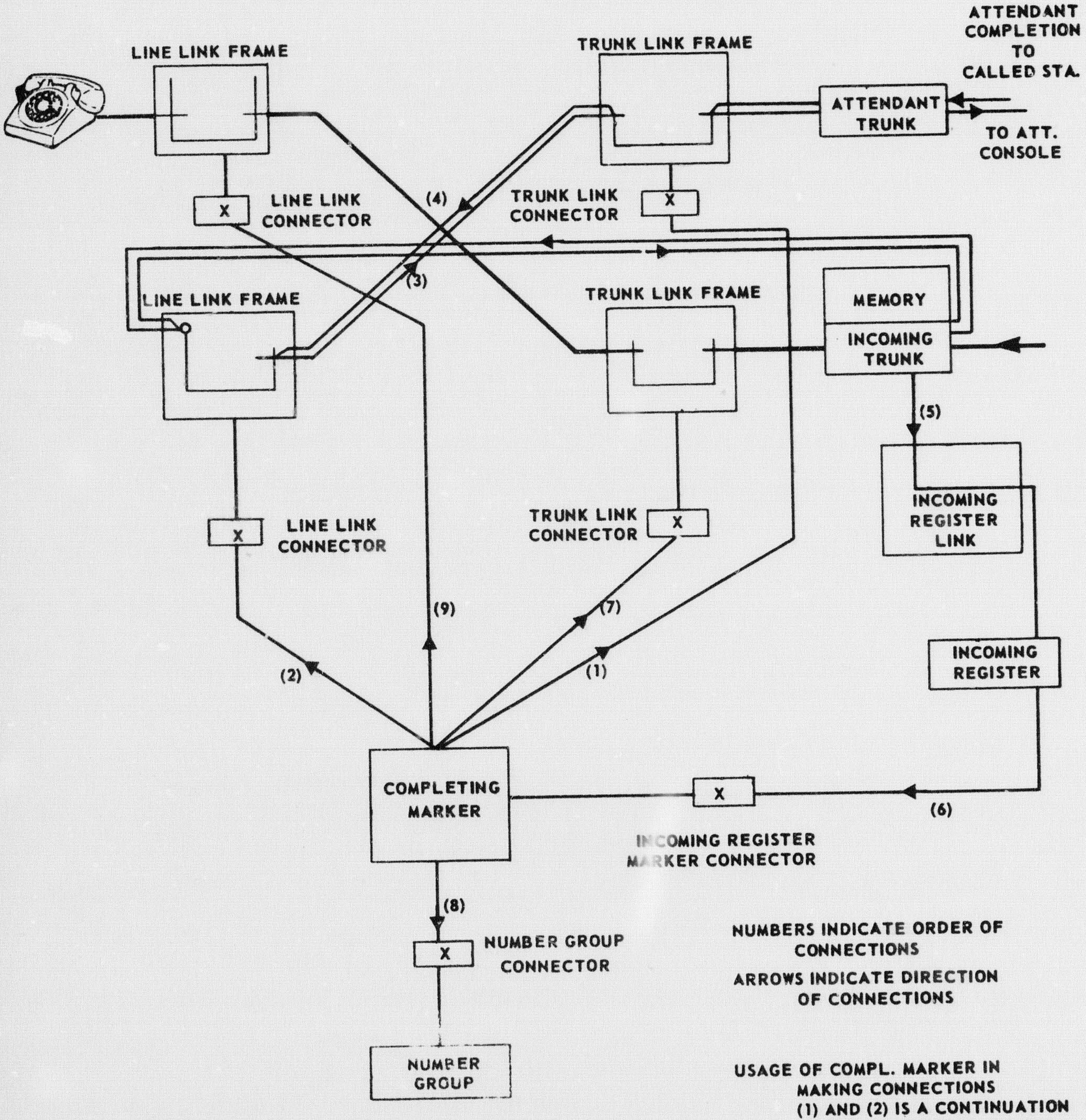
E232
Exhibit 11

DIRECTORY NUMBER CALL WITH ATTENDANT COMPLETION TO STATION

ADDITIONAL #5 X-BAR USAGE TO COMPLETE A BASIC INCOMING CALL VIA ATTENDANT


ATTENDANT COMPLETION TO CALLED STA.
LINE LINK FRAME
TRUNK LINK FRAME
ATTENDANT TRUNK
TO ATT. CONSOLE
X
LINE LINK CONNECTOR
(4)
TRUNK LINK CONNECTOR
X
(3)
LINE LINK FRAME
TRUNK LINK FRAME
MEMORY
INCOMING TRUNK
(5)
INCOMING REGISTER LINK
X
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
X
(9)
(7)
INCOMING REGISTER
(2)
(1)
COMPLETING MARKER
X
(6)
INCOMING REGISTER MARKER CONNECTOR
(8)
X
NUMBER GROUP CONNECTOR
NUMBER GROUP

NUMBERS INDICATE ORDER OF CONNECTIONS

ARROWS INDICATE DIRECTION OF CONNECTIONS

USAGE OF COMPL. MARKER IN MAKING CONNECTIONS (1) AND (2) IS A CONTINUATION OF THE SAME USAGE MAKING CONNECTIONS (3) AND (5) OF THE BASIC INCOMING CALL

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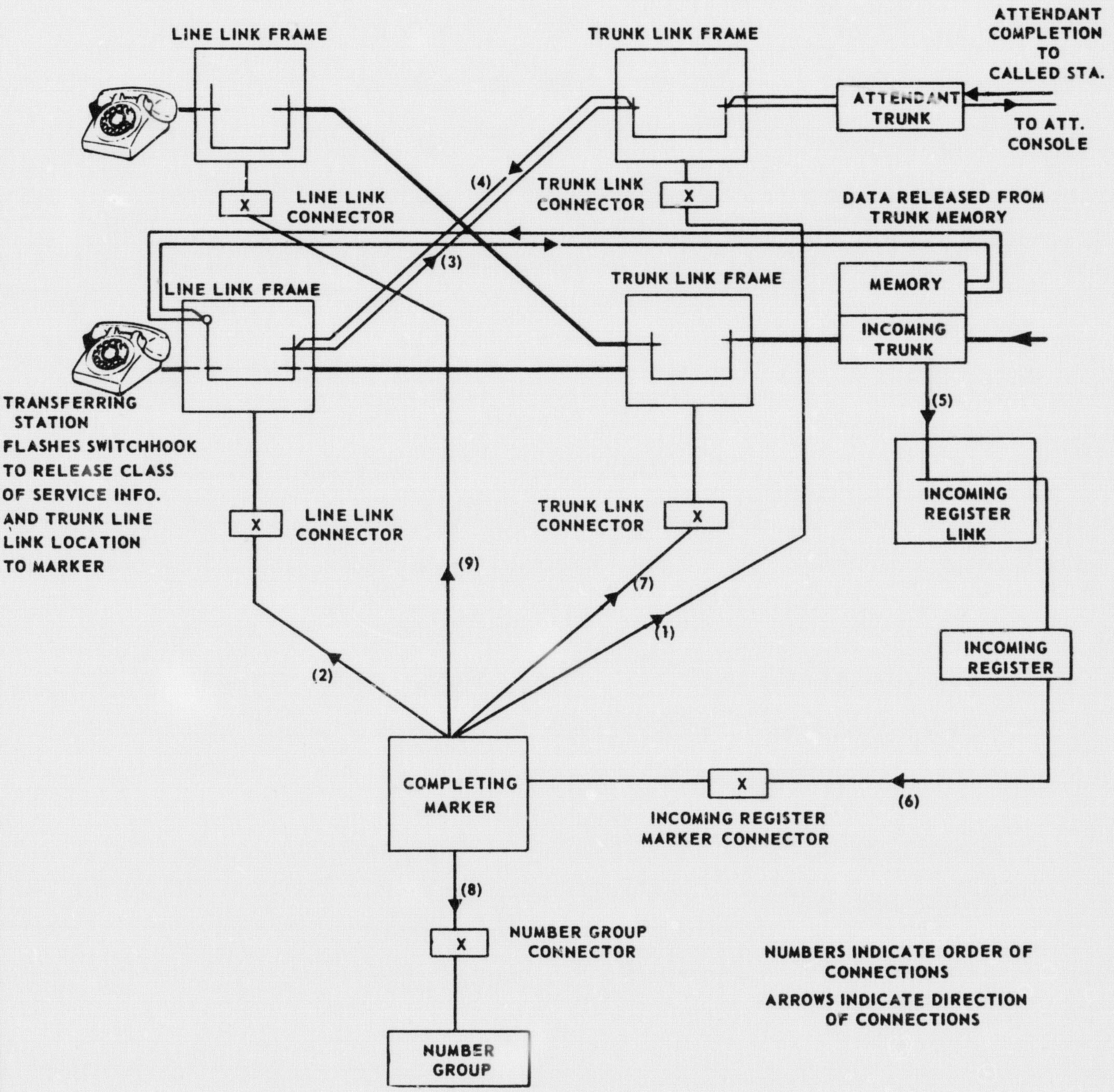
E233
Exhibit 11

STATION TRANSFER CALL WITH ATTENDANT COMPLETION TO STATION

ADDITIONAL #5 X-BAR USAGE TO COMPLETE A BASIC INCOMING CALL TRANSFERRED TO ANOTHER STATION VIA ATTENDANT


LINE LINK FRAME
TRUNK LINK FRAME
ATTENDANT COMPLETION TO CALLED STA.
ATTENDANT TRUNK
TO ATT. CONSOLE
X
LINE LINK CONNECTOR
(4)
TRUNK LINK CONNECTOR
X
DATA RELEASED FROM TRUNK MEMORY
(3)
LINE LINK FRAME
TRUNK LINK FRAME
MEMORY
INCOMING TRUNK
(5)
INCOMING REGISTER LINK
X
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
X
(9)
(7)
(1)
(2)
INCOMING REGISTER
COMPLETING MARKER
X
(6)
INCOMING REGISTER MARKER CONNECTOR
(8)
X
NUMBER GROUP CONNECTOR
NUMBER GROUP

TRANSFERRING STATION FLASHES SWITCHHOOK TO RELEASE CLASS OF SERVICE INFO. AND TRUNK LINE LINK LOCATION TO MARKER

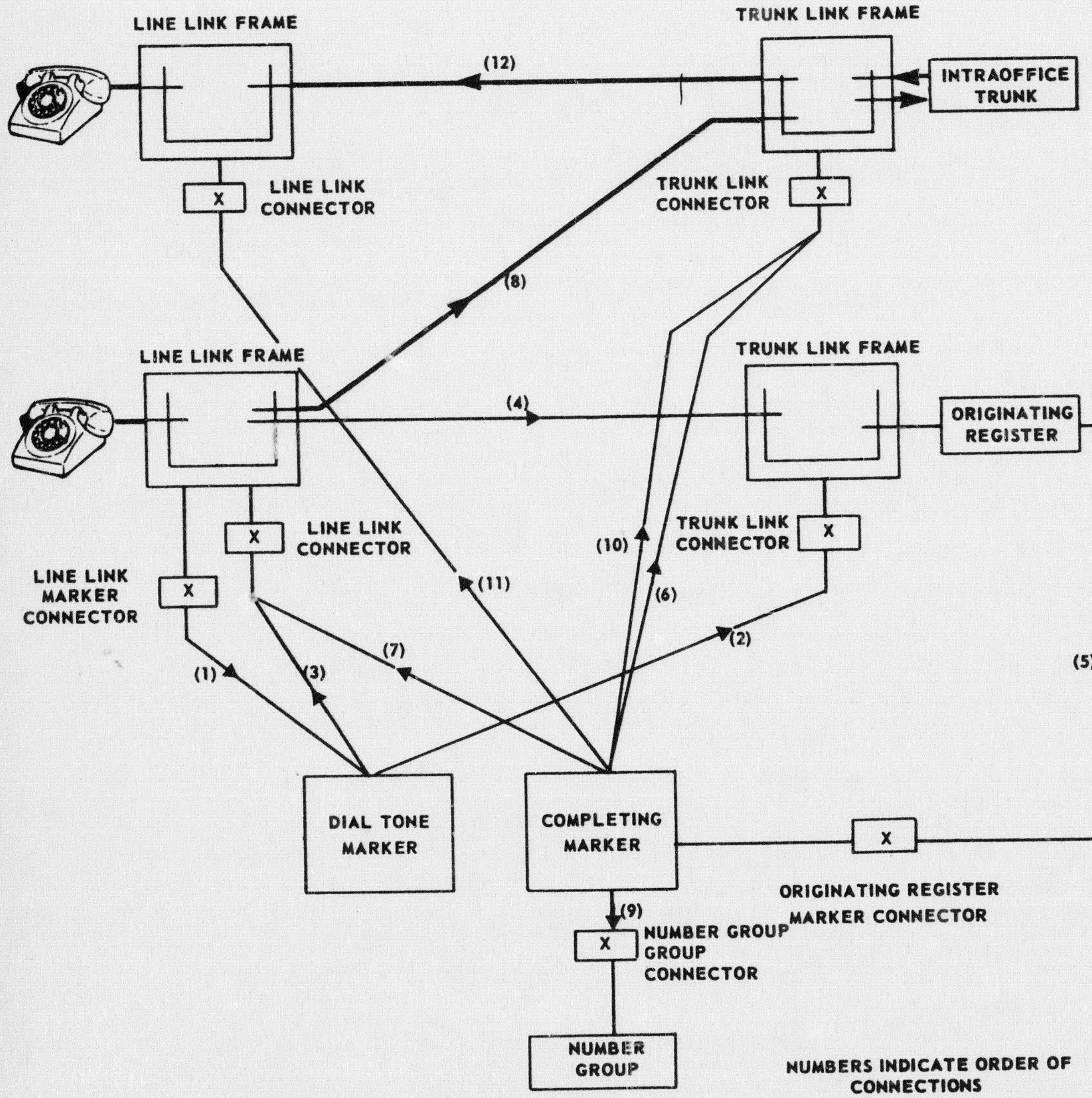
NUMBERS INDICATE ORDER OF CONNECTIONS

ARROWS INDICATE DIRECTION OF CONNECTIONS

E234
Exhibit 11

INTRACUSTOMER GROUP CALL

TOTAL #5 X-BAR USAGE TO COMPLETE AN INTRACUSTOMER CALL


LINE LINK FRAME
TRUNK LINK FRAME
(12)
INTRAOFFICE TRUNK
X
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
X
(8)
LINE LINK FRAME
TRUNK LINK FRAME
(4)
ORIGINATING REGISTER
X
LINE LINK CONNECTOR
(10)
TRUNK LINK CONNECTOR
X
LINE LINK MARKER CONNECTOR
X
(11)
(6)
(2)
(7)
(1)
(3)
(5)
DIAL TONE MARKER
COMPLETING MARKER
X
(9)
X
NUMBER GROUP GROUP CONNECTOR
ORIGINATING REGISTER MARKER CONNECTOR
NUMBER GROUP

NUMBERS INDICATE ORDER OF CONNECTIONS

ARROWS INDICATE DIRECTION OF CONNECTIONS

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E235

Exhibit 11

DIAL "0" OUTGOING CALL

TOTAL #5 X-BAR USAGE TO COMPLETE AND OUTGOING CALL VIA ATTENDANT

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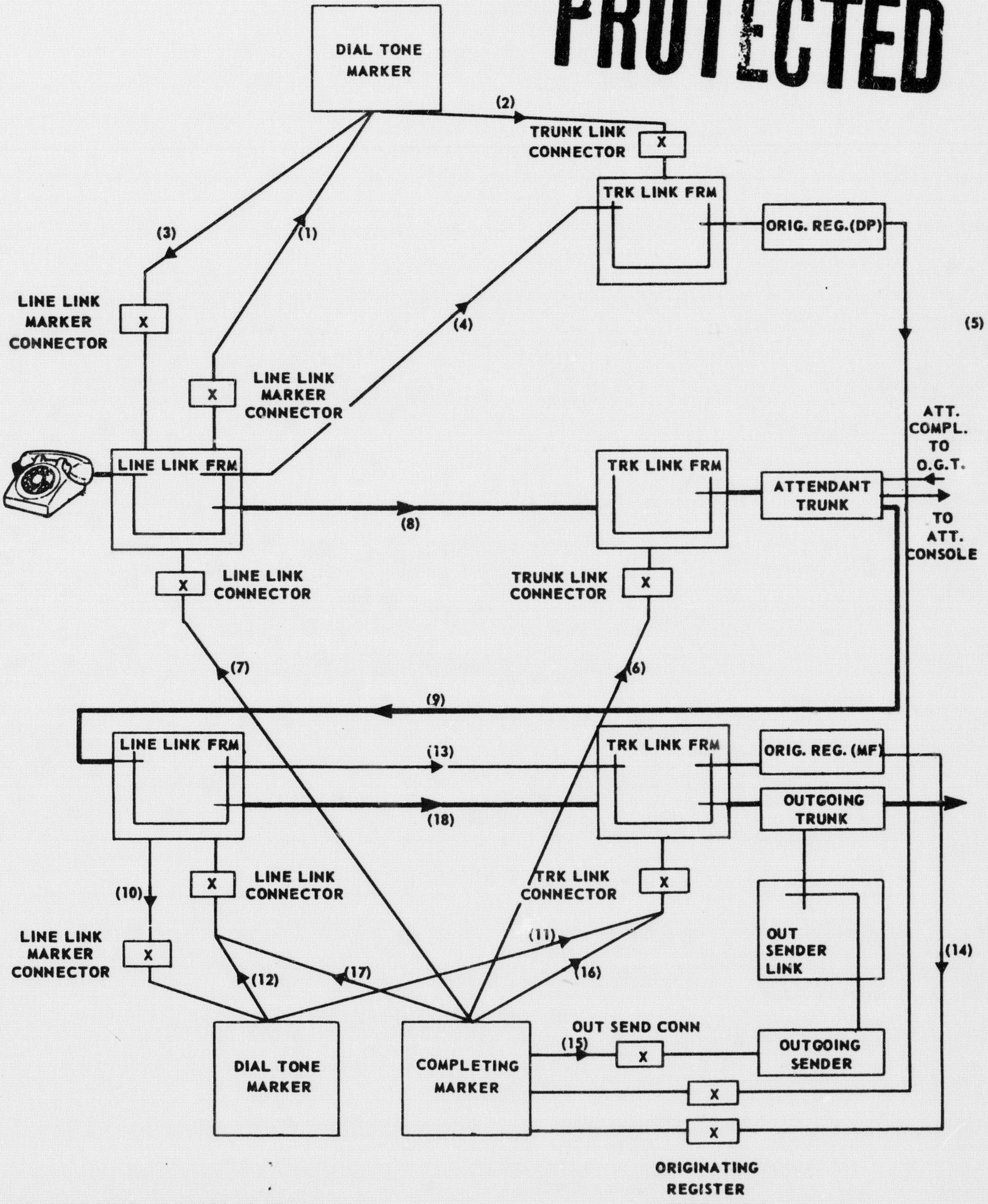
DIAL TONE MARKER
(2)
TRUNK LINK CONNECTOR
X
TRK LINK FRM
ORIG. REG.(DP)
(3)
(1)
LINE LINK MARKER CONNECTOR
X
(4)
(5)
X
LINE LINK MARKER CONNECTOR
ATT. COMPL. TO O.G.T.
LINE LINK FRM
TRK LINK FRM
ATTENDANT TRUNK
(8)
TO ATT. CONSOLE
X
LINE LINK CONNECTOR
TRUNK LINK CONNECTOR
X
(7)
(6)
(9)
LINE LINK FRM
(13)
TRK LINK FRM
ORIG. REG. (MF)
OUTGOING TRUNK
(18)
(10)
X
LINE LINK CONNECTOR
TRK LINK CONNECTOR
X
LINE LINK MARKER CONNECTOR
X
OUT SENDER LINK
(11)
(14)
(12)
(17)
(16)
DIAL TONE MARKER
COMPLETING MARKER
OUT SEND CONN
(15)
X
OUTGOING SENDER
X
X
ORIGINATING REGISTER MARKER CONNS.

NUMBERS INDICATE ORDER OF CONNECTIONS
ARROWS INDICATE DIRECTION OF CONNECTIONS

E236
Exhibit 11

LOCAL TRUNK RELAY & OUTSIDE PLANT COSTS

		Trunk Relay Equipment			
	#7 Rec. Ann.	Local Inc.	Local Outg.	Trans. Feature	Intra-Office
Investment Per Trunk Relay Eqpt.		$150.00	$250.00	$225.00	$180.00
Investment Per L.L. Frm. Appear.				20.00	
Total	$900.00	$150.00	$250.00	$245.00	$180.00
CCS Per Trunk		15.5	15.5	15.5	27.0
Investment Per CCS		$ 9.70	$ 16.10	$ 15.80	$ 6.65
CCS/Main Station		1.675	1.675	1.675	1.50
Investment Per Main Station	$ 3.00	$ 16.20	$ 27.00	$ 26.50	$ 10.00

	Outside Plant		
	Local Inc.	Local Outg.	Total
Average Length of Local Trunk Loop	5 Miles	5 Miles	
Cost Per Mile (Book Cost)	$46.00	$46.00	
Investment Per Local Trunk Loop	$230.00	$230.00	
CCS Per Trunk	15.5	15.5	
Investment in Trunk Loop Per CCS	$14.85	$14.85	
CCS Per Main Station - Total	1.675	1.675	
% Interbuilding - Local	80%	80%	
CCS Per Main Station - Interbldg. - Local	1.34	1.34	
Investment Per Main Station	$19.90	$19.90	
½ Assignable to Calling Station & ½ to Called Station.	$ 9.95	$ 9.95	$19.90

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E237
Exhibit 11

EXCHANGE OUTSIDE PLANT COSTS

PER PAIR

CURRENT COST FOR NEW FEEDER CABLE PLANT AND SUPPORTING STRUCTURES

Radius From C.O. of Serving Area in Miles	Average Loop in Miles (a)	Cost Per Pair Investment (b)	Cost Per Pair Monthly Carry Chgs. (26%/Yr.÷12 Mos.)
.5	.3	$ 13	$0.28
1.0	.6	23	0.49
1.5	.9	33	0.72
2.0	1.2	46	1.00
2.5	1.5	70	1.52
3.0	1.8	91	1.97
3.5	2.1*	115	2.50
4.0	2.4	144	3.12
4.5	2.7	170	3.69

* Average Central Office Loop

(a) Assumes that $\frac{1}{2}$ of the customer group stations would be in the inner (midtown) quarter of the area described by a radius $\frac{1}{2}$ of the total circle radius.

(b) Based on the average of the shortest and longest loop: the shortest loop being 1000 feet, the longest 1.2 times the radius.

Cost of the main station loop is based on feeder cable excluding distribution cable and terminals since it is assumed sufficient additional pairs will be required to justify a new express cable to the customer.

PROTECTED

E238
Exhibit 11

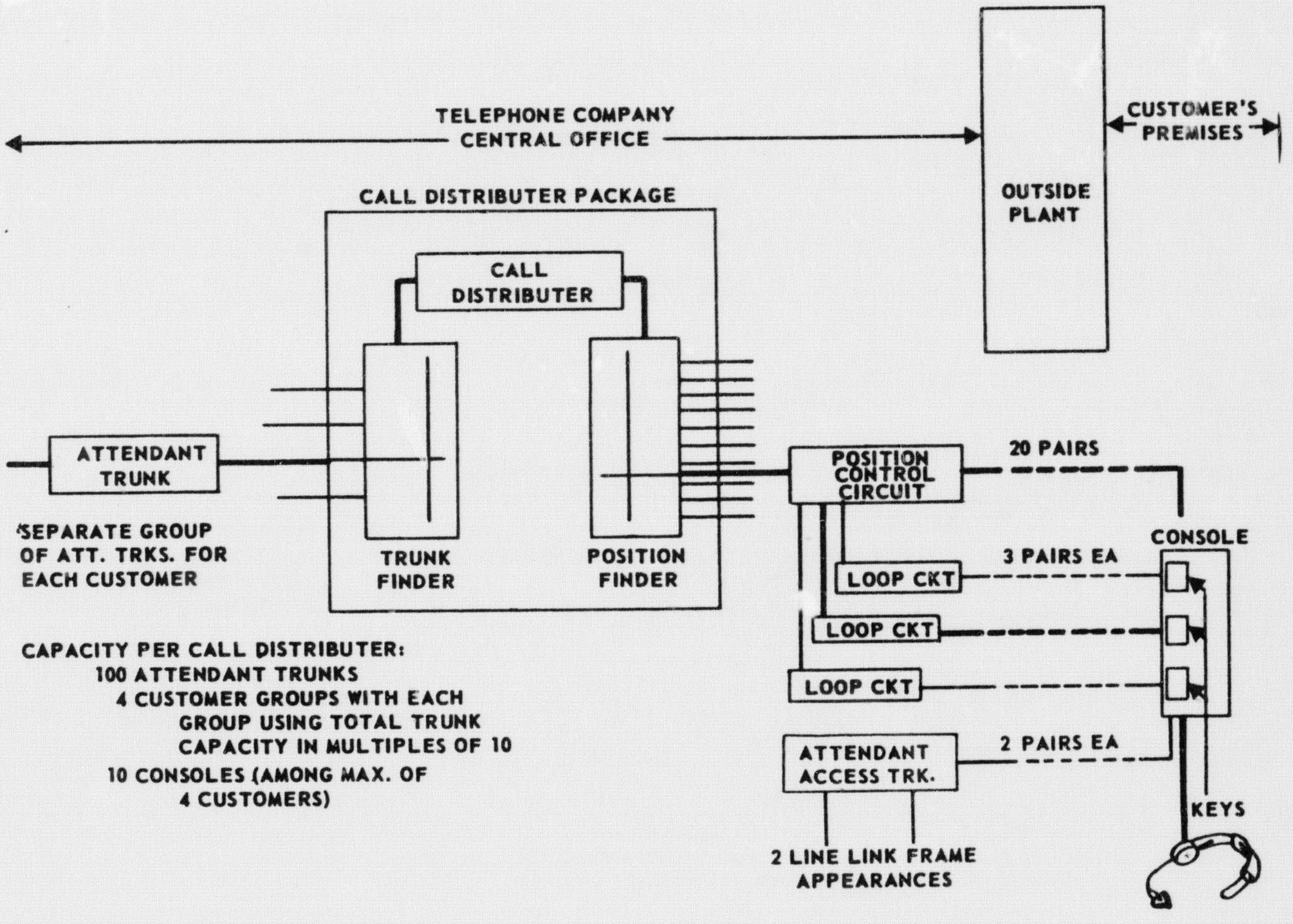
ATTENDANT CONSOLE UNIT
AND ASSOCIATED CENTRAL OFFICE EQUIPMENT
CENTREX-CO

	Invst. Per Unit	Units Per Console	Invst. Per Console	Out. Plt. Pairs Req'd. (Not Incld.)
Central Office Equipment				
Console Position Control Ckt.	$810	1	$ 810	20+
Loop Circuit	270	3	810	9
Attendant Trunk	725	4.5	3,260	
Call Distributor ($7,200 ÷ 10 cons. x 80% Fill)	900	1	900	
Attendant Access Trunk	280	1	280	2
Total C.O. Eqpt. Investment			$6,060	Call: 35
% Annual Carrying Charge			28%	
C.O. Eqpt. Annual Charges			$1,700	
Land & Building				
Total Land & Bldg. Investment			$1,210	
% Annual Carrying Charge			24%	
Land & Bldg. Annual Charges			$ 290	
Sub Total of Above - Tel.Co. Premises				
Total Investment			$7,270	
Annual Charges			1,990	
Monthly Revenue Requirements			$ 166	
Attendant Console Unit - Customer Premises				
Total Console Investment	$500	1	$ 500	
% Annual Carrying Charge			29%	
Console Annual Charges			$ 145	
Monthly Revenue Requirements			$ 12	
Total Console & Asso. Eqpt.				
Total Investment			$7,770	
Annual Charges			$2,135	
Monthly Revenue Requirements			$ 178	

PROTECTED

E239
Exhibit 11

ATTENDANT CONSOLE
AND
ASSOCIATED CENTRAL OFFICE EQUIPMENT
#5 X-BAR CENTREX – CO.


TELEPHONE COMPANY CENTRAL OFFICE
CUSTOMER'S PREMISES
OUTSIDE PLANT
CALL DISTRIBUTER PACKAGE
CALL DISTRIBUTER
ATTENDANT TRUNK
TRUNK FINDER
POSITION FINDER
POSITION CONTROL CIRCUIT
20 PAIRS
CONSOLE
3 PAIRS EA
LOOP CKT
LOOP CKT
LOOP CKT
ATTENDANT ACCESS TRK.
2 PAIRS EA
KEYS
2 LINE LINK FRAME APPEARANCES

'SEPARATE GROUP OF ATT. TRKS. FOR EACH CUSTOMER

CAPACITY PER CALL DISTRIBUTER:
100 ATTENDANT TRUNKS
4 CUSTOMER GROUPS WITH EACH GROUP USING TOTAL TRUNK CAPACITY IN MULTIPLES OF 10
10 CONSOLES (AMONG MAX. OF 4 CUSTOMERS)

PROTECTED

E240
Exhibit 11

ATTENDANT SWITCHBOARD
&
ASSOCIATED EQUIPMENT
CENTREX-CO

	Investment Per Unit	Units Per Pos.	Investment Per Pos.	Out. Plt. Pairs Req'd. (Not Included)
Central Office Equipment				
Attendant Trunks to Call Dist.	410	5.5	$2,250	9
Total C.O. Eqpt. Investment			$2,250	10-15 (Incl. Misc.)
% Annual Carrying Charge			28%	
C.O. Eqpt. Annual Charges			$ 630	
Land and Building				
Total Land & Bldg. Investment			$ 450	
% Annual Carrying Charge			24%	
Land & Bldg. Annual Charges			$ 110	
Sub Total of Above - Tel. Co. Premises				
Total Investment			$2,700	
Annual Charges			$ 740	
Monthly Revenue Requirements			$ 61	
Attendant Position - Customer Premises				
Switchboard Position			$3,700 (Incl. Pwr.)	
Tone Supply			400	
Total Investment - Cust. Prem.			$4,100	
% Annual Carrying Charge			29%	
Annual Carrying Charges			$1,190	
Monthly Revenue Requirements			99	
Total Swbd. Pos. & Asso. Eqpt.				
Total Investment			$6,800	
Answer Charges			$1,930	
Monthly Revenue Requirements			160	

PROTECTED

E241
Exhibit 11

TYPICAL DERIVATION
OF
REVENUE REQUIREMENTS FOR CENTREX CU

COMMON CONTROL AREAS
STEP-BY-STEP AREAS
FUTURE #5XB

COSTS FOR HANDLING BASIC INCOMING AND OUTGOING
TRAFFIC ARE THE SAME AS DEVELOPED
FOR CENTREX CO.

PROTECTED

E242
Exhibit 11

General

This section presents a method of developing revenue requirements for Centrex-CU using 701A dial PBX equipment.

Revenue requirements at current cost levels are included for:-

A. Basic PBX Service -

1. 701A PBX switching equipment.
2. Stations and wiring.

B. Centrex-CU Service with:-

1. Separate PBX's
2. Centralized 701A switching equipment serving several customers.

C. Attendant Facilities

1. Positions
2. Consoles

D. Automatic Number Identification

Centrex-CU is a "Package" consisting of:

1. Direct inward dialing of calls to extension numbers. (DID)
    - a. Each extension station to have a seven digit station number (either 2L-5N or ANC)
    - b. Calls dialed in to be standard 7 pull (10 pull)
2. Outward dialing by extensions of toll calls with individual station number identification at a CAMA. (IOD)
    - a. At present this requires a CAMA operator.
    - b. In the future ANI will be developed which will eliminate the CAMA operator.
3. Transfer

    Transfer of incoming calls is a basic requirement with DID.
4. Vacant Number intercept arrangements also are a basic requirement with Centrex. A #7A Recorded Announcement system is provided in each case studied.

Note: Intra P.B.X. calls would be made using 3, 4 or 5 digits.

PROTECTED

E243
Exhibit 11

Centrex CU Costs include:

1. P.B.X. switching equipment:
To permit "IN" dialing a separate incoming switch train must be installed at the P.B.X. to carry the calls previously completed by the Attendant.

If a customer has a main dial P.B.X. (701) and a dial satellite (711) with intercommunicating over dial tie lines DID and IOD for both locations using common C.O. trunks to the main 701 P.B.X. should cost effectively the same as it would if all of the extensions were located at the main P.B.X.

The study assumes that no restrictions would be placed on any of the extensions i.e. that all would be priveleged to place and receive calls using DID and IOD.

2. C.O.E. Changes:
When DID is introduced in Panel and Crossbar C.O. areas traffic is removed from the local C.O. and added to tandem.

In the future No. 5 Crossbar offices will be arranged to receive and pass DID calls on a local basis and an office code will be shared by a number of P.B.X.'s. (See Future #5xB)

This can be done now for a limited number of P.B.X.'s using foreign area translation and #5 Crossbar tandem features.

In a S x S central office 5th selectors and connectors are vacated and the P.B.X. trunks are put on the 4th selectors, sharing the C.O. code in many cases.

It is assumed that local Message unit calls would continue to be recorded on registers in the serving C.O.

3. O.S.P. Changes:
With the introduction of DID in a dial P.B.X. there are dislocations of O.S.P. usually resulting in an increase in the O.S.P. investment used by the P.B.X.

PROTECTED

E244
Exhibit 11

Centrex CU Costs exclude:

1. Attendant's Positions or Consoles:
   Revenue requirements also are shown separately for Positions and Consoles.

2. Tie lines and Tie line switching:
   Revenue requirements for Tie lines and other special service arrangements are not part of this study. Generally speaking DID using 701A P.B.X. equipment should not affect these costs.

Centralized P.B.X. for Centrex

Savings may be realized by centralizing dial P.B.X. equipment for a number of customers. This study assumes that:

1. The centralized P.B.X. would only serve P.B.X. customers within a building or adjacent buildings.

   Non-Centrex P.B.X. customers could be served from a centralized P.B.X. However, the study assumed that all would have DID.

2. The switching equipment would be in rented space in the building.

   It is not visualized that P.B.X. equipment would be centralized in a C.O. However, this might be done if the C.O. buildings were adjacent to a number of Centrex customers.

3. There would be no extra costs (other than longer cables) for placing cables within the building, i.e., there would be adequate conduit, terminal rooms, boxes, etc., provided by the building owner.

4. The equipment would be #701 type dial P.B.X.

5. For this study three customers were centralized; one with 300 extensions, one with 600 extensions and the third with 1800, making a total of 2700.

6. Consoles would be used by the customers. If a customer wanted tie lines or other special service arrangements requiring cord operation, 608A positions would be used.

PROTECTED

E245
Exhibit 11

BASIC #701A P.B.X.

	Average of High and Low CCS/ Ext.		
	300 Main Extensions	600 Main Extensions	1,800 Main Extensions
Investment per Main Extension			
P.B.X. Switching Equipment	$77.00	$73.00	$63.00
House Cable	8.50	8.50	9.00
Station Equipment and Wiring	30.00	30.00	30.00
Revenue Requirements per Main Extension per Month			
P.B.X. Switching Equipment	1.85	1.75	1.53
House Cable	.20	.20	.22
Station Equipment and Wiring	1.10	1.10	1.10

Notes:

P.B.X. switching equipment cost per main extension for all practicable purposes may be said to level off at the rates shown for the 1,800 extension size.

The revenue requirement for a bridged extension station, assuming no call stimulation, would be that shown for Station Equipment and Wiring.

Average of high and low CCS/M.S. cases shown because the spread of costs was not significant.

PROTECTED

E246
Exhibit 11

DERIVATION OF CENTREX CU REQUIREMENTS

COMMON CONTROL AREA

1800 M.S. PBX

(Additional Costs for Centrex Features)

	Quantity	Unit Cost	Total Cost
OUTSIDE PLANT			
Interlocal Trunks	-57 Trks.	$230	-$ 13,100
Local C.O. to Tan. Trks.	+56 Trks.	540	30,200
Serving C.O. to Toll Pts.	+56 Trks.	540	30,200
Net			$ 47,300
Annual Charge Rate			26%
Annual Carrying Charges			12,300
CENTRAL OFFICE			
LOCAL OFFICE			
Without Centrex CU	3,060CCS		
With Centrex CU	1,616CCS		
Net-Local	-1,444CCS	$34/CCS	-$ 49,100
TANDEM OFFICE			
Without Centrex CU	679CCS		
With Centrex CU	1,890CCS		
Net-Tandem	+1,211	$34/CCS	41,200
Net-Total C.O.E.			-$ 7,900
Annual Charge Rate			28%
Annual Carrying Charges			-$ 2,210
LAND & BUILDINGS			
LOCAL OFFICE			
Net-Local	-$49,100	20%	-$ 9,820
TANDEM OFFICE			
Net-Tandem	$41,200	20%	$ 8,240
Net-Total Land & Bldg.			-$ 1,580
Annual Charge Rate			24%
Annual Carrying Charges			-$ 380

PROTECTED

E247
Exhibit 11

P.B.X. - ADDN'L. FOR CENTREX

	Total Cost
Without Centrex CU (Based on detailed development of requirements)	$119,000
With Centrex CU	$161,000
Net PBX	$ 42,000
Annual Charge Rate	29%
Annual Carrying Charges	$ 12,180

COST OF VACATED PLANT

OUTSIDE PLANT

Assumes reuse by growth within normal engineering interval.

CENTRAL OFFICE

Assumes full reuse of plant in 6 years.

Vacated Plant	$ 49,100
Annual Charge Rate (Depr., Cost of Money, Inc. Tax, Prop. Tax)	16%
Annual Carrying Charge of Vacated Plt.	$ 7,850
Average of 3 years of Charges amortized over 10 year location life of PBX (2.577 Annuity to Pres. Worth - 3 years x .149 Pres. Worth to Annuity - 10 years).	.384
Net Annual Carrying Charge Penalty	$ 3,020

LAND & BUILDING

Vacated Plant	9,820
Annual Charge Rate (Depr., Cost of Money, Inc. Tax, Prop. Tax)	15.5%
Annual Carrying Charge of Vacated Plt.	$ 1,520
Amortization Factor	.384
Net Annual Carrying Charge Penalty	$ 585

REARRANGEMENTS AND CHARGES

FIRST YEAR EXPENSE #	1,800 M.S.	2.00/M.S.	$ 3,600
Amortized over 10 years	P.W. to Ann.	.149	$ 535
Per M.S. per month			$ 0.025
		Call it:	$ 0.05

Reflects C.O. rearrangements and station number plate changes.

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E248

Exhibit 11

Development of Costs for Centrex-CU in Common Control C.O. Areas

(Additional Costs for Centrex Features)

This example is for an individual 1800 extension P.B.X. (high cc/ms) on the customers premises (CU).

Summary of Costs	Investment	Annual Costs
1. OSP	$47,300	$12,300
2. C.O.E.	-7,900	-2,210
3. Land and Buildings	-1,580	- 380
4. P.B.X. Switching (Excess)	42,000	12,180
5. Cost of Vacated C.O.E., Land & Bldg.	-	3,605
Net	$79,820	$25,495
Revenue required per M.S. per month		1.20
ANI		.15
Rearrange & Changes		.05
Total		$ 1.40

1. O.S.P. Cost

OSP cost equals the net increase in (a) numbers of trunks in each route (as illustrated on the preceding sketch) times (b) the average length and (c) cost.

(a) Number of trunks:

Direct groups to or from P.B.X. - P.02 Trunk Table

Other groups = Total ccs + 15.5 ccs/trk.

The ccs in each trunk group is based on the Traffic distribution shown on page 26.

The ccs distribution in this case is as follows:

Out from P.B.X.	CCS	In to P.B.X.	CCS
Completing in serving C.O.	292	Originating in serving C.O.	292
To other local area C.O.'s	878	From other local C.O.'s	878
Total Local	1,170	Total Local	1,170
Via tandem and CAMA	206	Via Tandem	319
Via Toll Operator	154	Direct from Other Toll pts.	41
Total Toll	360	Total Toll	360
Total Out	1,530	Total In	1,530

(b) Lengths of Trunks

Serving C.O. to Other Local C.O.'s	5 miles
Local C.O.'s to serving tandem	8.3 miles
Serving C.O. to Toll Pts. - direct trunks	8.3 miles

(c) Cost per Trunk

Serving C.O. to Other Local C.O.'s $46/mi. x 5 = $230

Tributary C.C.'s to Tandem $65/mi x 8.3 = $540

Serving C.O. to Toll Pts. - direct routed $65/mi x 8.3 = $540

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PROTECTED

E249
Exhibit 11

Instead of direct group of trunks from the P.B.X. to CAMA tandem toll calls as well as outgoing local calls may be routed via the serving office. The efficiency gained by consolidating trunks to tandem may offset additional local switching costs.

The use of a direct group permits toll calls to be made by the extension user by dialing "1" followed by 7 or 10 digits. If all calls are routed via the serving office it will be necessary to introduce "9" i.e., "9" + "1" + 7 (or 10) digits.

2. COE Cost

COE cost equals the net of the reduced CCS in the serving office and the increased CCS in the Tandem office times the average cost per CCS in each instance.

The changes in CCS in the serving office and in the Tandem per the Traffic distribution shown on Pg.55 are as follows:

No Centrex	Serving C.O.	Tandem
All in and out traffic	3,060	
In Toll 20.8% x 1,530 CCS		318
Out Toll 23.5% x 1,530 CCS		361
Totals	3,060	679
With Centrex		
Local out from P.B.X. 76.5% x 1,530 CCS	1,170	
Out to Toll Operator 10% x 1,530 CCS	154	154
Inward to P.B.X. originating in Serving Co. 19.1% x 1,530 CCS	292	
IOD 13.5% x 1,530 CCS		206
DID 100% x 1,530 CCS		1,530
Totals	1,616	1,890
Change with DID	-1,444	+1,211
Net Change	-233 CCS	

3. Land and Building Costs = 20% of COE

4. P.B.X. Switching Costs

P.B.X. switching excess is based on complete development of the equipment required with and without Centrex using current costs.

5. Cost of Vacated COE

A cost which should be recognized is the local COE investment which is vacated and might remain idle for a considerable time. In a rapidly growing C.O. this equipment might be reused quickly; in a slow growing office it might take a number of years. Also if a number of P.B.X.'s were given "IN" dialing at one time the situation would be aggravated.

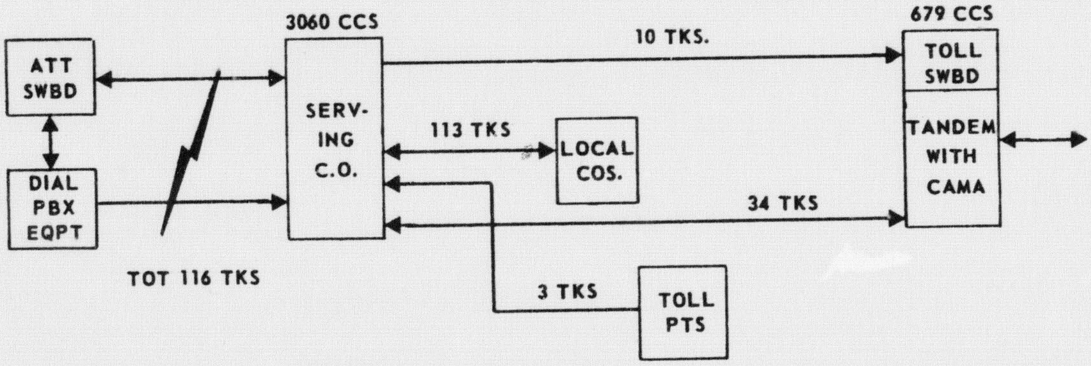
This study assumed that, on the average, it would take about 6 years to fully reuse the vacated C.O.E.

E250
Exhibit 11

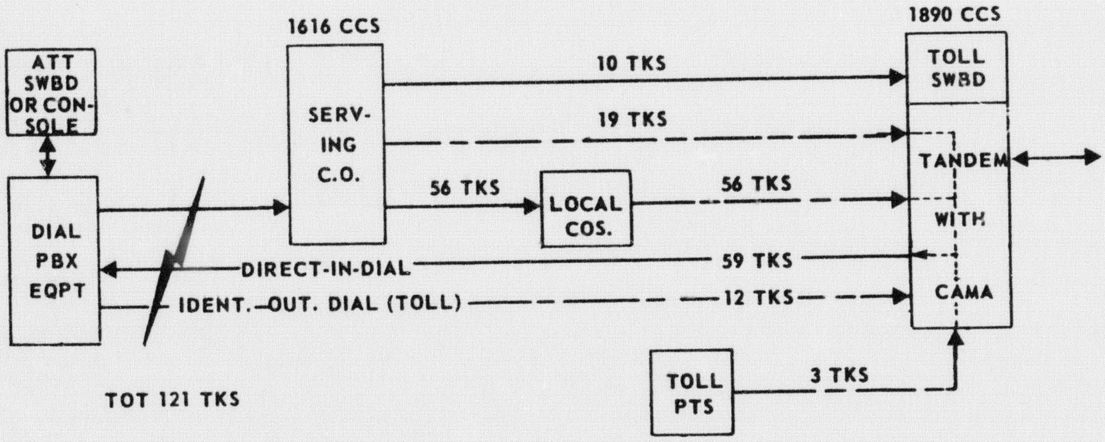
ILLUSTRATION OF CHANGES IN COE AND OSP WHICH OCCUR WITH INTRODUCTION OF DIRECT INWARD DIALING AND STATION IDENTIFIED OUTWARD TOLL DIALING

THIS ILLUSTRATION IS FOR AN 1800 MAIN STATION PBX IN A COMMON CONTROL AREA WITH CAMA TANDEM

WITH CONVENTIONAL DIAL PBX


3060 CCS
679 CCS
ATT SWBD
DIAL PBX EQPT
SERV-ING C.O.
10 TKS.
113 TKS
LOCAL COS.
34 TKS
3 TKS
TOLL PTS
TOLL SWBD
TANDEM WITH CAMA
TOT 116 TKS

WITH CENTREX – CU


1616 CCS
1890 CCS
ATT SWBD OR CON-SOLE
DIAL PBX EQPT
SERV-ING C.O.
10 TKS
19 TKS
56 TKS
LOCAL COS.
56 TKS
DIRECT-IN-DIAL
59 TKS
IDENT.–OUT. DIAL (TOLL)
12 TKS
TOLL SWBD
TANDEM WITH CAMA
TOLL PTS
3 TKS
TOT 121 TKS

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E251

Exhibit 11

DERIVATION OF CENTREX CU REQUIREMENTS

SxS AREA

1800 M.S. P.B.X.

(Additional Costs for Centrex Features)

	Quantity	Unit Cost	Total Cost
OUTSIDE PLANT			
Net			$ 0
CENTRAL OFFICE			
LOCAL OFFICE			
Net: Selectors	- 52	$ 90/Sel.	$- 4,680
Connectors	-101	193/Conn.	-19,495
Net - Total			$-24,175
Annual Charge Rate			30%
Annual Carrying Charges			$- 7,250
TANDEM OFFICE			
No Change			
LAND & BUILDINGS			
Net - Total	$-24,175	20%	$- 4,835
Annual Charge Rate			24%
Annual Carrying Charges			$- 1,160
PBX - ADDN'L. FOR CENTREX			
Without Centrex CU (Based on detailed			$119,000
With Centrex CU development of requirements)			161,000
Net PBX			$ 42,000
Annual Charge Rate			29%
Annual Carrying Charges			$ 12,180
C.O.E., LAND & BLDGS., OP			
Net - Code Relief & Misc.*	1,800 M.S.	$10/M.S.	$ 18,000
Annual Charge Rate			28%
Annual Carrying Charges			$ 5,040

* Reflects lower fills on a 10,000 number code due to Centrex CU users and the addition of 2nd selectors in offices throughout a metropolitan area.

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E252
Exhibit 11

COST OF VACATED PLANT

CENTRAL OFFICE

	Total Cost
Vacated Plant	$24,175
Annual Charge Rate (Depr., Cost of Money, Inc. Tax, Prop. Tax).	16.5%
Annual Carrying Charges	$ 3,980
Average of 3 years of Charges amortized over 10 year location life of PBX (2.577 Annuity to Pres. Worth - 3 years x .149 Pres. Worth to Annuity - 10 years).	.384
Net Annual Carrying Charge Penalty	$ 1,530

LAND & BUILDINGS

	Total Cost
Vacated Plant	$ 4,835
Annual Charge Rate (Depr., Cost of Money, Inc. Tax, Prop. Tax)	15.5%
Annual Carrying Charges	$ 750
Amortization Factor	.384
Net Annual Carrying Charge Penalty	$ 290

REARRANGEMENTS AND CHANGES

FIRST YEAR EXPENSE

Amortized over 10 years	1,800 M.S.	$3.00/M.S.	$ 5,400
Per M.S. per month	P.W. to Ann.	.149	$ 805
			$ 0.037
		Call it:	$ 0.05

Reflects C.O. rearrangements and station number plate changes.

PROTECTED

E253

Exhibit 11

Development of Cost for Centrex-CU in Step-by-Step C.O. Areas
(Additional Costs for Centrex Features)

Central office and outside plant costs associated with the installation of DID service in SxS central office areas vary widely.

For example in an isolated wire center with no other offices in its local service area these costs probably would be negligible or relatively small.

On the other hand in a large multi-office metropolitan center with a wide local service area very substantial C.O.E. and O.S.P. costs might be involved. For example if one or more new C.O. codes were required because of DID services and the first selectors in the offices thruout the area were congested it would be necessary to install an additional switch in each SxS office train. In such a situation very substantial investment and rearrangement costs would be necessary.

Because of these wide differences each SxS Company will want to evaluate the C.O.E. and O.S.P. costs which can be anticipated in its area.

The approach used in this study recognizes these factors, and the costs used attempt to express what might be found in an average situation.

The costs in the 1800 extension high CCS case are as follows:

Plant other than P.B.X. eqpt.	
Serving C.O. - Eqpt. vacated	$- 7,250
- Bldg. space vacated	- 1,160
- Charge for vacated C.O.E. and Bldg.	1,820
Other C.O.E. and O.S.P. costs	5,040
P.B.X. equipment	12,180
Total Cost	$ 10,630
Net	
Revenue required per M.S. per month	$ 0.50
ANI	0.15
Rearrange & Changes	0.05
Total	$ 0.70

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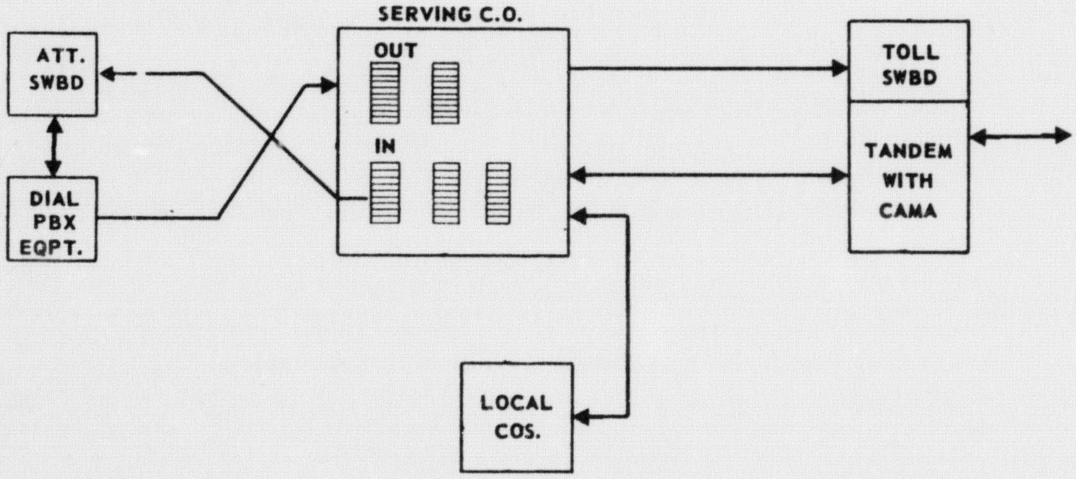
E254

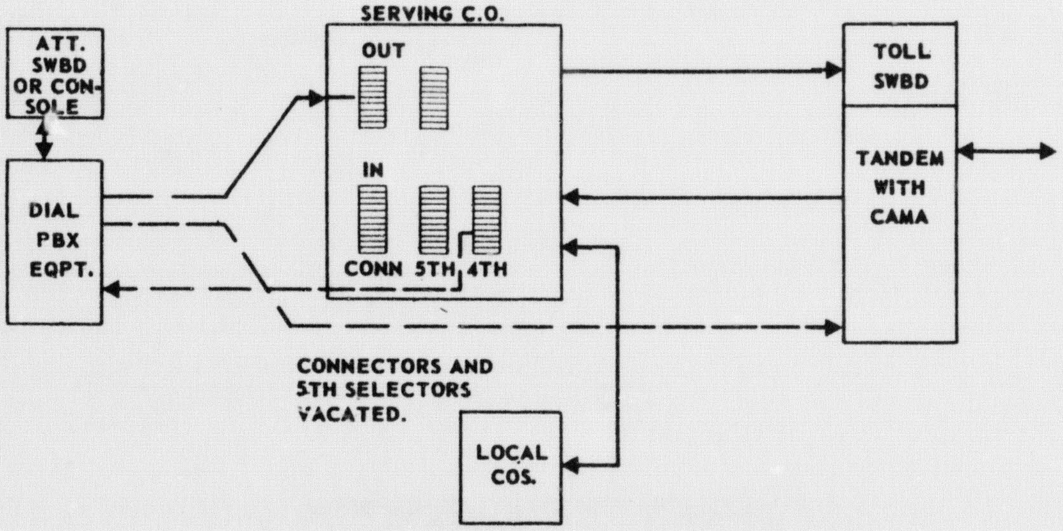
Exhibit 11

ILLUSTRATION OF CHANGES IN COE AND OP WHICH OCCUR WITH INTRODUCTION OF DIRECT INWARD DIALING AND STATION IDENTIFIED OUTWARD TOLL DIALING IN STEP-BY-STEP AREA WITH CAMA TANDEM

WITH CONVENTIONAL DIAL PBX


SERVING C.O.
OUT
IN
ATT. SWBD
DIAL PBX EQPT.
TOLL SWBD
TANDEM WITH CAMA
LOCAL COS.

WITH CENTREX – CU


SERVING C.O.
OUT
IN
CONN
5TH
4TH
ATT. SWBD OR CONSOLE
DIAL PBX EQPT.
TOLL SWBD
TANDEM WITH CAMA
LOCAL COS.

CONNECTORS AND 5TH SELECTORS VACATED.

PROTECTED

IN A LARGE MULTI-OFFICE LOCAL SERVICE AREA ADDITIONS OR REARRANGEMENTS MAY BE NECESSARY IN SOME OR ALL OF THE OTHER OFFICES IN THE AREA AND ADDITIONAL INTER-LOCAL TRUNKS MAY BE REQUIRED.

E255
Exhibit 11

Development of Costs for Centrex-CU in Future #5 XB Central Offices

(Additional Costs for Centrex Features)

It is expected that the Local Switching arrangement for Centrex-CU service in #5 crossbar offices referred to in the "Notes on Direct Dialing to and from P.B.X. Extension" will be made available.

With this addition it will be possible to switch DID traffic to P.B.X.'s on a local basis rather than by using the #5 XB tandem arrangement. This also will permit a single office code to serve a number of P.B.X.'s.

A preliminary estimate indicates that it would cost about $40,000 to modify an average size #5 XB office. The revenue requirements study allocated this investment to the three P.B.X.'s in proportion to the P.B.X. trunks serving each.

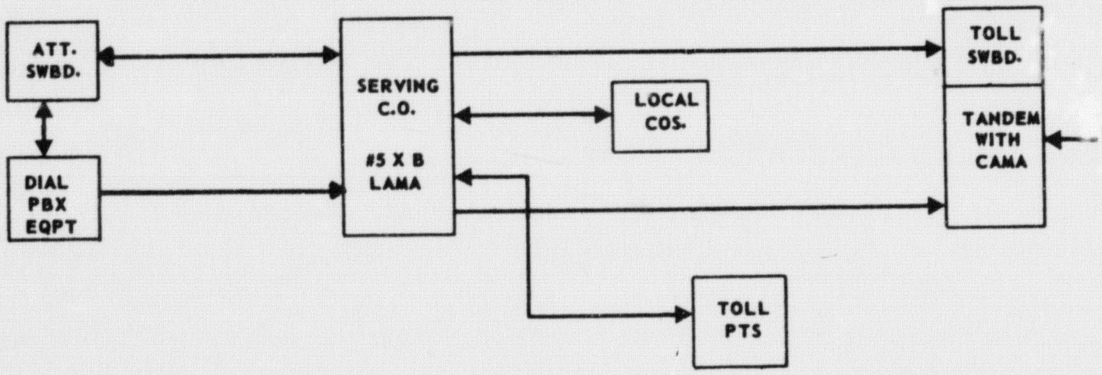
PROTECTED

E256
Exhibit 11

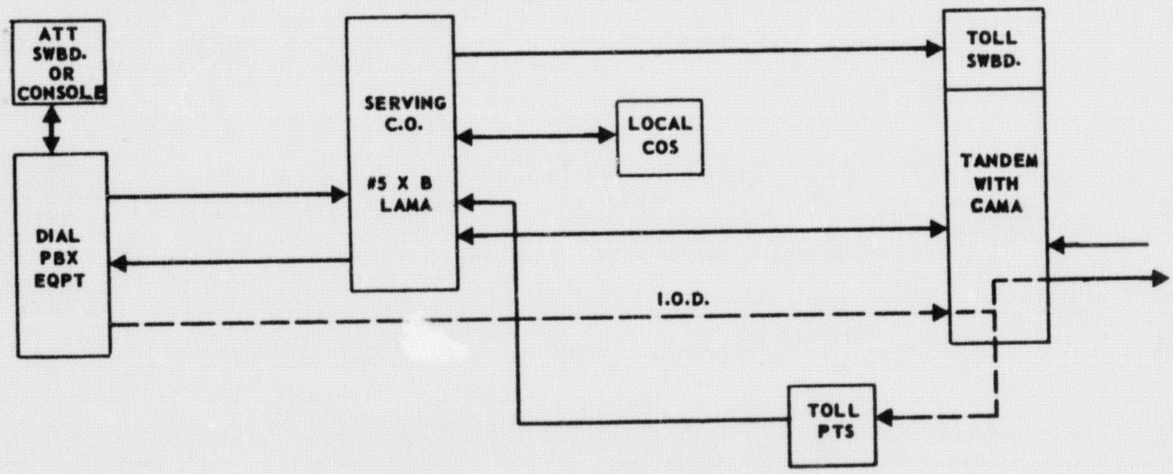
ILLUSTRATION OF CHANGES IN COE AND OP WHICH OCCUR WITH INTRODUCTION OF DIRECT INWARD DIALING AND STATION IDENTIFIED OUTWARD TOLL DIALING

IN FUTURE #5X-BAR AREA WITH CAMA TANDEM

WITH CONVENTIONAL DIAL PBX


ATT. SWBD.
DIAL PBX EQPT
SERVING C.O.
#5 X B LAMA
LOCAL COS.
TOLL SWBD.
TANDEM WITH CAMA
TOLL PTS

WITH CENTREX – CU


ATT SWBD. OR CONSOLE
DIAL PBX EQPT
SERVING C.O.
#5 X B LAMA
LOCAL COS
TOLL SWBD.
TANDEM WITH CAMA
I.O.D.
TOLL PTS

PROTECTED

E257
Exhibit 11

Automatic Number Identification (ANI)

The ANI equipment presently available for C.O.'s is suitably arranged for use in a P.B.X. but is quite expensive. A less costly type of ANI is being developed for P.B.X. use.

The estimated cost of ANI for P.B.X. use is based on preliminary information and therefore is uncertain. The indicated range is about as follows:

	Size of P.B.X.		
	300 M.S.	600 M.S.	1800 M.S.
Investment per Terminal (at P.B.X. and CAMA)	$42	$24	$11
Annual Cost per M.S./month (allowing for CAMA operating time saved)	$.75	$.30	$.15
Annual Cost per M.S./month (without allowance for CAMA operating time saved)	$1.00	$.50	$.25

Notes: -

ANI costs for larger P.B.X.'s or for Centralized PBX DID service would be about the same as for 1800 M.S.

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E258
Exhibit 11

DERIVATION OF O.P. COSTS/M.S.
FROM CUSTOMER TO SERVING CENT. OFC.

	Centrex CO (#5XB)	Centrex CU					
		300 M.S.		600 M.S.		1800 M.S.	
		High CCS *	Low CCS *	High CCS *	Low CCS *	High CCS *	Low CCS *
Out Plt Loop/MS	1/1	56/300	39/300	86/600	70/600	140/1800	95/1800
Radius From Cent. Ofc.							
.5	$0.28	$0.052	$0.036	$0.038	$0.033	$0.022	$0.014
1.0	0.49	0.092	0.063	0.067	0.057	0.038	0.026
1.5	0.72	0.135	0.094	0.098	0.084	0.056	0.038
2.0	1.00	0.187	0.129	0.137	0.117	0.077	0.055
2.5	1.52	0.280	0.198	0.207	0.177	0.119	0.080
3.0	1.97	0.368	0.256	0.269	0.230	0.153	0.104
3.5	2.50	0.467	0.325	0.342	0.292	0.194	0.132
4.0	3.12	0.583	0.406	0.427	0.364	0.242	0.164
4.5	3.69	0.689	0.479	0.505	0.431	0.287	0.194

* PBX Trunks Required

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E259
Exhibit 11

SUMMARY

Revenue Requirements for Centrex Features

Using Dial P.B.X. Equipment

Per Main Extension per Month

Serving C.O.	300 Main Exts. High CCS/M.S.	300 Main Exts. Low CCS/M.S.	600 Main Exts. High CCS/M.S.	600 Main Exts. Low CCS/M.S	1,800 Main Exts. High CCS/M.S.	1,800 Main Exts. Low CCS/M.S.
A. Separate P.B.X. Installations on Customer's Premises (CU)						
Common Control	$2.25	$1.95	$1.85	$1.55	$1.20	$ .95
Step-by-Step	.75	.50	.65	.40	.50	.25
Future #5 Crossbar	1.85	1.50	1.50	.70	.95	.65
B. Centralized P.B.X. in Space Rented by the Telephone Co. Serving 3 Customers (CO)						
Common Control	$2.50	$2.50	$2.05	$2.05	$1.35	$1.30
Step-by-Step	1.00	1.05	.85	.90	.65	.60
Future #5 Crossbar	2.10	2.05	1.70	1.20	1.10	1.00

Notes:

1. Stations, Station Wiring, P.B.X. Trunks and Attendant Positions (Consoles) are excluded.
2. CAMA used is in "Home" Tandem.
3. Requirements shown assume identification of extension number by CAMA operator.
4. With Automatic Number Identification add:

Separate PBX	$ .75	$ .75	$ .30	$ .30	$ .15	$ .15
Centralized	.15	.15	.15	.15	.15	.15

5. For amortized first year Rearrangements and Changes expenses add $0.05 per main extension.
6. Includes: (a) P.B.X. Switching Equipment required to provide direct inward dialing (b) excess O.S.P. investment for inter-office trunks and (c) net C.O.E. investment (local and tandem) plus a charge for vacated equipment and building space.
7. Basic local central office, basic P.B.X., and station and wiring costs must be added to the above costs to determine the full cost of Centrex service.

E260
Exhibit 11

ATTENDANT CONSOLE
&
ASSOCIATED EQUIPMENT
CENTREX-CU

	Investment Per Unit	Units Per Console	Investment Per Console
Equipment Associated with Console			
Position Control Ckt.	$250	1	$ 250
Loop Ckt.	250	4	1000
Attendant Trunks	250	2	500
Call Distributor	770	1	770
2-Way Pos. Trunks	165	1	165
Attend. Selectors	75	4	300
Register Senders	1145	.6	685
Reg. Sendr. Link	970	.2	195
Total Associated Equipment			$3865
% Annual Carrying Charge			29%
Annual Carrying Charges			$1120
Attendant Console Unit			
Total Investment	500	1	$ 500
% Annual Carrying Charge			29%
Annual Carrying Charges			$ 145
Total Console & Asso. Eqpt.			
Total Investment			$4365
Annual Charges			$1265
Monthly Revenue Requirements			$ 105

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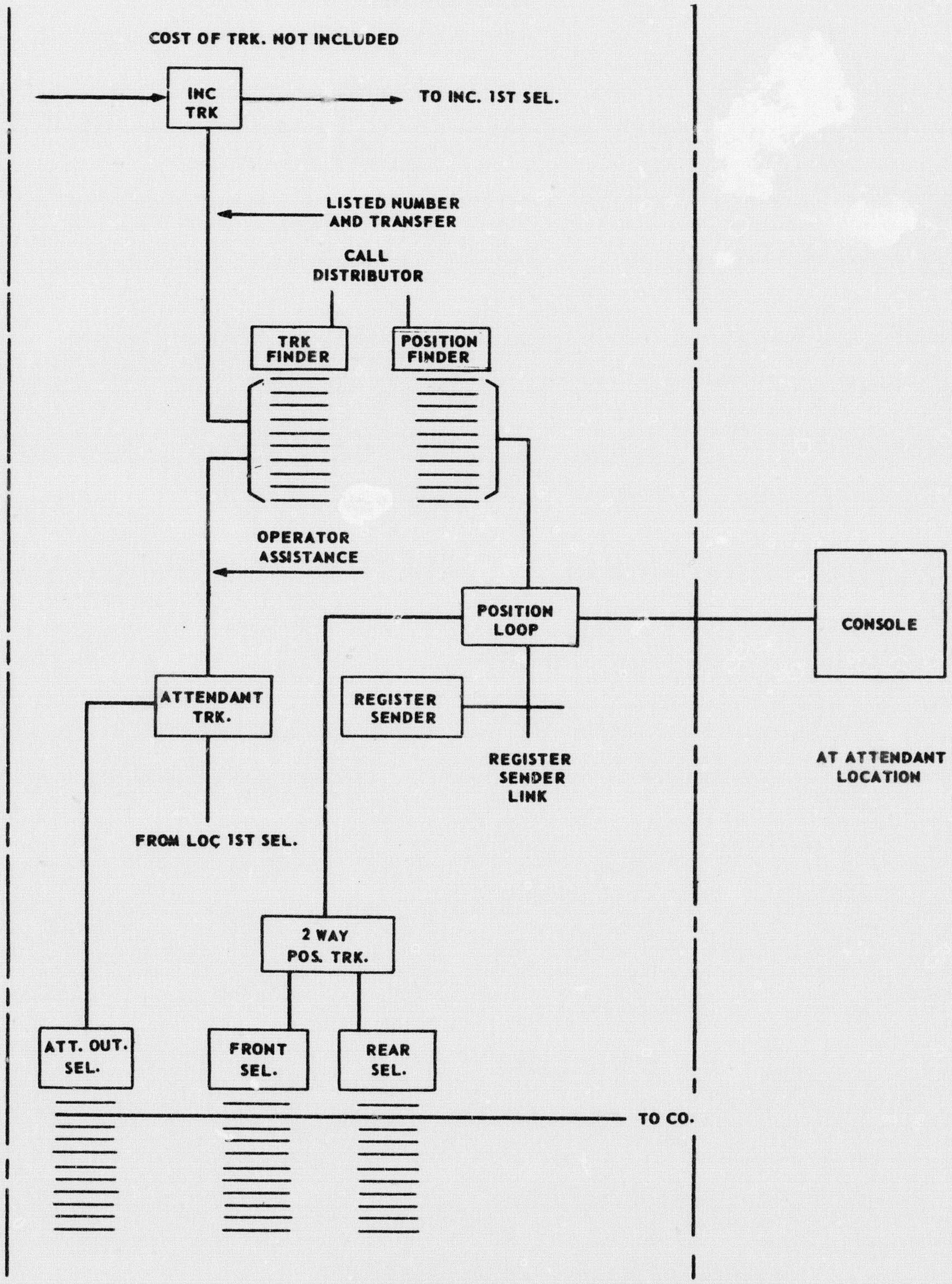
E261
Exhibit 11

ATTENDANT CONSOLE AND ASSOCIATED EQUIPMENT CENTREX – CU


COST OF TRK. NOT INCLUDED
INC TRK
TO INC. 1ST SEL.
LISTED NUMBER AND TRANSFER
CALL DISTRIBUTOR
TRK FINDER
POSITION FINDER
OPERATOR ASSISTANCE
POSITION LOOP
CONSOLE
ATTENDANT TRK.
REGISTER SENDER
REGISTER SENDER LINK
AT ATTENDANT LOCATION
FROM LOC 1ST SEL.
2 WAY POS. TRK.
ATT. OUT. SEL.
FRONT SEL.
REAR SEL.
TO CO.

PROTECTED

E262
Exhibit 11

ATTENDANT SWITCHBOARD

&

ASSOCIATED EQUIPMENT

CENTREX-CU

	Investment Per Unit	Units Per Position	Investment Per Position
Equipment Associated with Swbd. Pos.			
Trunk Finders	1.2	172	$ 206
Attendant Trunks	2	46	92
Transfer Trunks	1.2	43	52
Listed No. Trunks	4	66	264
Attendant Selectors	4	100	400
Attendant OGT	2	27	54
Register Senders	.8	1145	915
Reg. Sendr. Link	.2	970	195
Total Associated Equipment			$2078
% Annual Carrying Charge			29%
Annual Carrying Charges			$ 600
Attendant Switchboard Position			
Total Investment			$3700 (Incl. Pwr.)
% Annual Carrying Charge			29%
Annual Carrying Charges			$1070
Total Switchboard Pos. & Asso. Eqpt.			
Total Investment			$5778
Annual Charges			$1670
Monthly Revenue Requirements			$ 140

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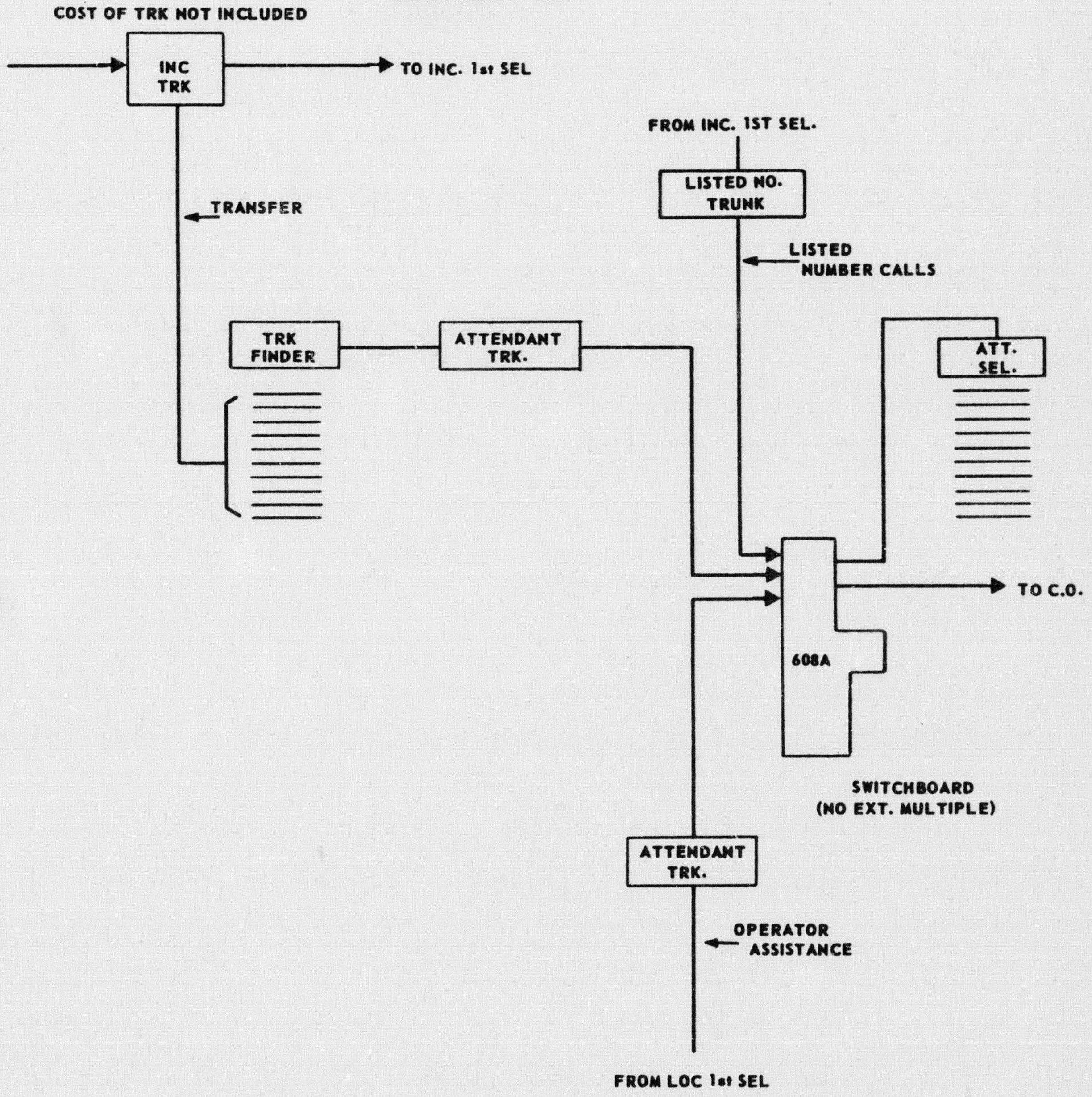
E263
Exhibit 11

ATTENDANT SWITCHBOARD
AND
ASSOCIATED EQUIPMENT
CENTREX - CU


COST OF TRK NOT INCLUDED
INC TRK
TO INC. 1st SEL
TRANSFER
FROM INC. 1ST SEL.
LISTED NO. TRUNK
LISTED NUMBER CALLS
TRK FINDER
ATTENDANT TRK.
ATT. SEL.
TO C.O.
608A
SWITCHBOARD (NO EXT. MULTIPLE)
ATTENDANT TRK.
OPERATOR ASSISTANCE
FROM LOC 1st SEL

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E264
Exhibit 11

CENTRALIZED P.B.X. WITH CENTREX

Three P.B.X.'s - 300 exts., 600 exts. and 1,800 exts. Centralized
(with CAMA Operator Identification)
Excess Costs Associated With Centralized P.B.X.

	300		600		1,800		Centralized	
	High CCS/MS	Low CCS/MS	High CCS/MS	Low CCS/MS	High CCS/MS	Low CCS/MS	Three High CCS/MS	Three Low CCS/MS
P.B.X. Equipment with DID (excluding Trunks and Positions)								
Inv.-Separate PBX's	$37,500	$33,000	$59,600	$59,600	$161,000	$129,000	$258,100	$221,600
" -Centralized PBX							213,400	202,300
-Saving by Centralizing							44,700	19,300
A.C.- " "							$-12,980	$ -5,600
House Cable Excess About 100 ft. or $1/M.S. x .29 A.C. =							7,800	7,800
Rent for Building Space per Year							11,000	10,500
Net Annual Cost							5,820	12,700

Allocation of Net Annual Cost

These costs were allocated in proportion to the equipment investment at each P.B.X. The cost to each being as follows: Since space is really what is being furnished, this method seems reasonable.

Per Year	845	1,905	1,345	3,435	3,635	7,360
Per M.S./Mo.	.23	.53	.19	.48	.17	.34
Call it	.25	.55	.20	.50	.15	.35

Cost of DID with Centralized P.B.X. (CAMA Operator Identification)

Serving C.O.						
Common Control	2.50	2.50	2.05	2.05	1.35	1.30
Step-by-Step	1.00	1.05	.85	.90	.65	.60
Future #5 X-Bar	2.10	2.05	1.70	1.20	1.10	1.00
with ANI ADD	.15	.15	.15	.15	.15	.15

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E265
Exhibit 11

BASIC DATA

TRAFFIC CHARACTERISTICS

&

ANNUAL CARRYING CHARGE RATES

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E266
Exhibit 11

Traffic Characteristics

	300 M.S.			600 M.S.			1800 M.S.		
	MR High CCS/MS	FR Low CCS/MS	Aver. CCS/MS	MR High CCS/MS	FR Low CCS/MS	Aver. CCS/MS	MR High CCS/MS	FR Low CCS/MS	Aver. CCS/MS
Inward Calling (outward calling same)									
CCS/MS	1.67	.97		1.47	.93		.87	.55	
Holding Time	190"	120"		190"	120"		190"	120"	
Calling Rate	.89	.82		.78	.78		.46	.46	
Intra Calling									
CCS/MS			1.50			1.65			1.65
Holding Time			100"			100"			100"
Calling Rate			1.50			1.65			1.65

Origin and Type of Inward Calls in % of Total

Local Traffic		
From stations in the Serving C.O.	19.1%	
" other local C.O.'s	57.4%	
Total Local in		76.5%
Toll Traffic		
Direct via serving C.O.	2.7%	
Via tandem and serving C.O.	20.8%	
Total Toll in		23.5%
Total Inward		100.0%

Routing and Type of Outward Calls

Local Traffic		
To stations in the Serving C.O.	19.1%	
To other local C.O.'s	57.4%	
Total local out		76.5%
Toll Traffic		
Via Toll Board	10.0%	
Other Out Toll Calls	13.5%	
Total Toll Out		23.5%
Total Outward		100.0%

Distribution Within P.B.X.

Inward to P.B.X. (% of CCS)	No DID	With DID
Listed number	100%	20% ø
Direct to extensions		80% *
Total in	100%	100%

*Transfer 5% of DID
øRecall 5% of Listed number (with DID)

	With or Without DID		
Outward from P.B.X. (% of CCS)	% of Local	% of Toll	% of Total
Direct Dialed - Local	100%		76.5%
- Toll		55.5%	13.5%
Via Attendant - Toll		44.5%	10.0%
Total Out	100%	100%	100.0%

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E267
Exhibit 11

ANNUAL CARRYING CHARGES
PERCENT OF TOTAL INVESTMENT

	Central Office Equipment		Land & Building	Outside Plant	Station Eqpt.		
	SxS	X-Bar			Tel. App.	Connect	Large PBX
Maintenance	8.3	5.7	3.3	3.7	11.7	11.7	6.8
Depreciation	3.5	3.2	2.0	3.4	5.5	13.5	4.8
Administration	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Ad. Valorem & Misc. Taxes	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Cost of Money & Fed. Income Tax (8% Return)	10.5	10.5	11.0	10.5	9.8	15.4#	9.4
Total	30.4	27.5	24.4	25.7	35.1*	48.7*	29.1
Call it.	30	28	24	26	43*		29

Full cost of money used since reserve for this account is kept at about $0.

* Weighted Average - $12.00 x 35.1% = $4.21
$18.00 x 48.7% = 8.77
$30.00 = 12.98 = 43.3%

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E268
EXHIBIT 12
May 3, 1961 letter from F.C. Smith
to W. B. Ellis *et al*.

Centrex Service - Suggested Meeting Dealing With the Rate Aspects

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY. NEW YORK 7. N.Y.

AREA CODE 212
EX 3-3737

F. C. SMITH
RATE ADMINISTRATOR

lc

May 3, 1961

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

Mr. W. B. Ellis
General Commercial Manager
Ches. & Pot. Tel. Co. of West Virginia
Charleston 1, West Virginia

Dear Mr. Ellis:

You have no doubt received Mr. Kertz' letter of April 28, 1961, and the accompanying binder entitled "Centrex Service - Rate Development Considerations." The latter document provides a detailed discussion of the fundamental principles underlying the suggested rate treatment. Also, it illustrates the method of approach that seems to be most appropriate for the Companies to follow in developing suitable rate levels for use in their territory.

This is a big and complex subject and a number of the Companies recently have indicated their interest in a review of all its aspects. Accordingly, arrangements have been made for a two-day meeting in New York on May 17 and 18, 1961 for that purpose. Our thought would be to have one representative from each Company, desirably the division level rate man who will be directly responsible for the development of the Centrex rates.

The meeting will be held here at "195" in Room 1900, starting at 9:30 a.m. on May 17, 1961. The proposed agenda should permit closing by 3:00 p.m. on May 18, 1961.

It is important that each conferee will have reviewed the rate binder and had some preliminary discussions with Engineering, Traffic and Marketing coordinates, as well as having a working familiarity with the cost data sent out by our Engineering Economics people to the Chief Engineers with Mr. Ostergren's letter of March 24, 1961.

The conference arrangements are being handled by Bob Kemp (212 - EX 3-3309). It will be appreciated if you would let him know by May 10, 1961 who your Company's representative will be and any hotel or other arrangements we can make for him.

Very truly yours,

F. C. Smith

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Rate Administrator

To Special Mailing List

E269
EXHIBIT 14
Charts from May 17 and 18, 1961 meeting

USA 38a-475
(ED. 4-23-71)
PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
14

FPI-MI—9-24-75-50M-4417

The basic pricing objectives are . . . .

- A SINGLE COMPOSITE SERVICE OFFERING.
- A REASONABLE RETURN ON INVESTMENT.
- HIGH DEVELOPMENT.
- MEETING COMPETITION.
- "PACKAGED" RATES ON STATION BASIS.
- SYSTEMWIDE UNIFORMITY OF RATE APPROACH.
- CENTREX RATES MESHED WITH BASIC EXCHANGE AND CONVENTIONAL PBX RATES.

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E270
Exhibit 14

A "package" rate composed of . . . .

- A STATION RATE (PROVIDING BASIC FACILITIES, EQUIPMENT AND TRUNKS), AND
- AN ATTENDANT'S POSITION RATE

IS SUITED TO CENTREX SERVICE BECAUSE IT . . . .

- IS EASILY UNDERSTOOD BY CUSTOMERS,
- SIMPLIFIES RATE ADMINISTRATION,
- RELATES RATE TO CUSTOMER'S BASIC REQUIREMENTS,
- AVOIDS A MULTIPLICITY OF PRICED ITEMS,
- PERMITS A SINGLE COMPOSITE RATE FOR CENTREX-CU AND CENTREX-CO,
- PROVIDES UNIFORMLY HIGH QUALITY OF SERVICE UNDER COMPANY CONTROL.

PROTECTED

E271
Exhibit 14

The basic Centrex service offering furnishes . . . .

- EQUIVALENT OF CONVENTIONAL PBX SERVICE

PLUS

- DIRECT IN-DIALING TO STATIONS,
- STATION IDENTIFICATION ON OUTWARD TOLL TRAFFIC,
- TRANSFER OF INCOMING CALLS FROM ONE STATION TO ANOTHER,
- INTERCEPT - MACHINE OR ATTENDANT, AND
- NIGHT CONNECTIONS.

PROTECTED

E272
Exhibit 14

A single composite Centrex service and rate "package" will . . . .

- PERMIT BLENDING OF THE REVENUE REQUIREMENTS OF DIFFERENT SERVING METHODS.

  EXCLUDES VALUE OF FLOOR SPACE AND POWER FOR CENTREX-CO.

- MAKE CENTREX AVAILABLE TO LARGE BUSINESS CUSTOMERS IN PRACTICALLY ALL AREAS.
- GIVE COMPANY MAXIMUM LATITUDE IN CHOOSING MOST APPROPRIATE EQUIPMENT ARRANGEMENTS.
- PRESERVE REVENUE-PRODUCING VALUE OF MUCH EXISTING DIAL PBX EQUIPMENT.
- MINIMIZE CUSTOMER "PICKING AND CHOOSING" SERVING METHOD BASED ON PRICE CONSIDERATIONS.

PROTECTED

E273
Exhibit 14

Centrex-CO should be restricted to "where facilities permit" ....

- CUSTOMER HAS ALTERNATIVE - CENTREX-CU.
- AVOIDS UNECONOMIC USE OF PLANT.
- TARIFF RESTRICTION CAN BE ADMINISTERED.
- HOLDS COMPOSITE RATE TO MORE SALABLE LEVELS.
- LEGAL DISCRIMINATION - PROTECTS GENERAL RATE PAYERS.

PROTECTED

E274
Exhibit 14

The trunk component of the "package" station rate reflects the value-of-service principle....

- OTHER COMPONENTS OF RATE ARE OF SAME RELATIVE VALUE REGARDLESS OF EXCHANGE SIZE.
- VALUE PRINCIPLE IN PBX RATES IS REFLECTED TODAY IN TRUNK CHARGE.
    - STUDY APPROACH RECOMMENDS USING PRESENT-DAY TRUNK CHARGES IN DEVELOPING CENTREX RATES.
    - MAINTAINS VALUE PRINCIPLE NOW REFLECTED IN TRUNK RATES.
- VALUE PRINCIPLE CAN BE MAINTAINED WITH FEWER RATE GROUPS.

PROTECTED

E275
Exhibit 14

Centrex station rate should be tapered ....

- IN LINE WITH PRICING PHILOSOPHY OF BUSINESS GENERALLY - LOWER PRICE FOR VOLUME PURCHASE.
- PROVIDES MARKETING TOOL
  - TO SELL ADDITIONAL STATIONS.
  - TO MINIMIZE BRIDGED EXTENSION DEVELOPMENT.
  - TO MINIMIZE "FULLY-RESTRICTED" STATION DEVELOPMENT.
- FITS DECLINING REVENUE REQUIREMENTS AS CUSTOMER'S SIZE INCREASES.
- LENDS ITSELF TO PRICING MULTI-LOCATION INSTALLATIONS.
- FACILITATES EVENTUAL REDUCTION OF STATION MINIMUM.

PROTECTED

E276
Exhibit 14

Revenue requirements indicate initial need for minimum system size . . . .

- REVENUE REQUIREMENTS PER LINE INCREASE AS SIZE DECREASES.
- A 300 STATION MINIMUM MEETS REVENUE REQUIREMENTS WITH MARKETABLE RATES.
- MINIMUM SIZE CAN BE REDUCED LATER AS DEVELOPMENT INCREASES AND EQUIPMENT DESIGN PROGRESSES.
- PERMITS A MORE ORDERLY INTRODUCTION OF THE SERVICE.

PROTECTED

E277
Exhibit 14

An appropriate level for bridged extensions should . . . .

- HAVE LOWER CHARGE THAN CENTREX MAIN STATION.
- MEET LEGITIMATE NEEDS FOR BRIDGES.
- AVOID STIMULATING UNNECESSARY BRIDGES AT EXPENSE OF MAIN STATIONS.
- INCLUDE SHARE OF SWITCHING EQUIPMENT COST.
- EXCEED BUSINESS EXTENSION RATE.

PROTECTED

E278
Exhibit 14

An appropriate level for fully-restricted stations should . . . .

- FULLY REFLECT ACTUAL COSTS INVOLVED.
- GUARD COMPANY AGAINST CHARGE OF UNFAIR COMPETITION.
- BE PRICED BELOW UNRESTRICTED STATION RATE.
- MEET COMPETITION.
- HAVE SAME CHARGE STATEWIDE.

PROTECTED

E279
Exhibit 14

Bridged stations should be priced lower than fully-restricted stations....

- JUSTIFIED BY REVENUE REQUIREMENTS.

  CENTREX-CO FULLY-RESTRICTED TELEPHONE HAS INDIVIDUAL LOOP.

- FULLY-RESTRICTED PROVIDES EXCLUSIVE USE - BRIDGED STATION IS SHARED USE.
- FULLY-RESTRICTED STATIONS DO NOT GENERATE USAGE REVENUES.
- LOW-COST BRIDGES OFFER GOOD COMPETITION TO PRIVATELY-OWNED EQUIPMENT SINCE BRIDGES CAN REACH THE EXCHANGE NETWORK.

PROTECTED

E280
Exhibit 14

Centrex rates should include allowance for future PBX Automatic Number Identification costs . . . .

CONSIDERATIONS:

Important to furnish service identical to company premises installations.

Probably not available before 1964-1965.

Might increase Centrex rates 25¢ - 75¢ per Centrex line per month.

Business and residence exchange customers don't pay increased rates when ANI furnished.

Centrex customers are high toll users. Company gains if they use DDD network.

Would be difficult to increase rates when ANI added to existing Centrex installations.

If cost included in Centrex rate now it seems Company would have obligation to furnish ANI within reasonable period after availability.

CONCLUSION:

Include allowance for anticipated PBX ANI costs when Centrex rates are initially established.

Accept obligation to install PBX ANI equipment as soon as practicable consistent with orderly programming.

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E281
Exhibit 14

Centrex Service - example of proposed rate treatment....

PER MAIN STATION PER MONTH

		CUSTOMER PREMISES				COMPANY PREMISES
GROUP	TELEPHONES IN LOCAL SERVICE AREA	FIRST 50	NEXT 250	NEXT 600	OVER 900	ADDED CHARGE
Centrex Schedule I	Less than 67,000	$9.50	$9.00	$7.00	$4.50	$0.25
Centrex Schedule II	67,000 to 374,999	10.75	10.25	7.75	5.00	0.35
Centrex Schedule III	Message Rate Metropolitan Area	8.00	7.00	5.75	4.00	0.50

Notes: 1. All Centrex Schedules - Minimum charge is for 300 main stations

2. Centrex Schedule III - No message allowance included.

BRIDGED EXTENSION TELEPHONES:

Schedules I and II - Flat Rate	$3.00 each
Schedule III - Message Rate	2.75 each

FULLY RESTRICTED TELEPHONES:

Schedules I, II and III	3.50 each

ATTENDANTS' POSITIONS:

Console	$125.00 each
608A Cord Switchboard	$125.00 each

PROTECTED

E282
Exhibit 14

Centrex revenue requirements - basic considerations . . . .

- POTENTIAL MARKET - NUMBER, SIZE AND LOCATION OF CUSTOMERS BASED ON ABOUT 5 YEAR VIEW.
- TRAFFIC CHARACTERISTICS FOR VARIOUS SIZED INSTALLATIONS.
- TYPES OF SERVING CENTRAL OFFICES INVOLVED.
    - ESTIMATED MIX OF CENTREX-CU CENTRAL OFFICES.
    - ESTIMATED MIX OF CENTREX-CU AND CENTREX-CO.
- HANDLING OF OUTGOING TRAFFIC.
- SIZE OF BASIC SERVING AREA.
    - EFFECT OF OUTSIDE PLANT COSTS.
- DESIRABLE NUMBER OF CENTREX RATE GROUPS.

PROTECTED

E283
Exhibit 14

CENTREX - CU

EXAMPLE OF APPROACH USED IN DEVELOPING RATE LEVELS
(Section IV, Attachment 1 - Schedule I, 300 Main Stations)

PBX AND STATION (ENGINEERING STUDY - PAGE 34)		$3.15
IN-DIAL FEATURES (ENGINEERING STUDY - PAGE 48)		1.62
STEP-BY-STEP 40% x .75 =$0.30		
FUTURE #5 X-BAR 20% x 1.85 = 0.37		
COMMON CONTROL 40% x 2.25 = 0.90		
REARRANGEMENTS AND CHANGES = 0.05		
AUTOMATIC NUMBER IDENTIFICATION (ENGINEERING STUDY - PAGE 48)		0.55
AVERAGE COSTS ASSUMING 60% - 300 STATION, 20% - 600 STATION AND 20% - 1800 STATION INSTALLATIONS.		
EXCHANGE TRUNKS (RATE STUDY - SECTION IV, ATTACHMENT 3)		3.24
ATTENDANT EQUIPMENT (ENGINEERING STUDY - PAGE 9)		0.14
CONSOLE - 60% x 136.00 x 2 =	$163.20	
608A - 40% x 160.00 x 2 =	128.00	
WEIGHTED AVERAGE 2 POSITIONS	$291.20	
LESS SUGGESTED POSITION CHARGE (2 x 125) =	250.00	
EXCESS TO COVER IN STATION RATE	$ 41.20	
AMOUNT PER STATION ($41.20 ÷ 300)	$ 0.14	
CONTINUOUS PROPERTY CIRCUITS		0.15
TO COVER PRESENT ESTIMATED REVENUES		
TOTAL		$8.85

PROTECTED

E284
Exhibit 14

CENTREX - CO

EXAMPLE OF APPROACH USED IN DEVELOPING RATE LEVELS (Section IV, Attachment 2 - Schedule I, 300 Main Stations)

INTRACUSTOMER TRAFFIC (ENGINEERING STUDY - PAGE 16)		$3.45
INCOMING AND OUTGOING TRAFFIC (RATE STUDY - SECTION IV, ATT. 3)		3.24
STATION AND WIRING (ENGINEERING STUDY - PAGE 16)		1.08
STATION LOOP (ENGINEERING STUDY - PAGE 26)		1.24
300 PAIRS AT $1.52 EACH =	$456.00	
LESS ALLOWANCE IN TRUNK RATE		
56 PAIRS AT $1.52 EACH =	85.12	
EXCESS TO COVER	$370.88	
AMOUNT PER STATION	$ 1.24	
ATTENDANT EQUIPMENT (ENGINEERING STUDY - PAGES 27 AND 29 AND RATE STUDY - SECTION III, PAGE 9)		0.58
CONSOLES INCLUDING LOOPS (35 PAIRS)		
60% x ($178.00 + $53.20) x 2	= $277.44	
608A SWITCHBOARDS INCLUDING LOOPS (15 PAIRS)		
40% x ($160.00 + $22.80) x 2	= 146.24	
AVERAGE COST 2 POSITIONS	$423.68	
LESS SUGGESTED POSITION CHARGE (2 x $125.00)	= 250.00	
EXCESS TO COVER IN STATION RATE	$173.68	
AMOUNT PER STATION ($173.68 ÷ 300)	$ 0.58	
CONTINUOUS PROPERTY CIRCUITS		0.15
TO COVER PRESENT ESTIMATED REVENUES		
TOTAL		$9.74

PROTECTED

E285
Exhibit 14

Some important considerations in choosing size of Centrex base rate area . . . .

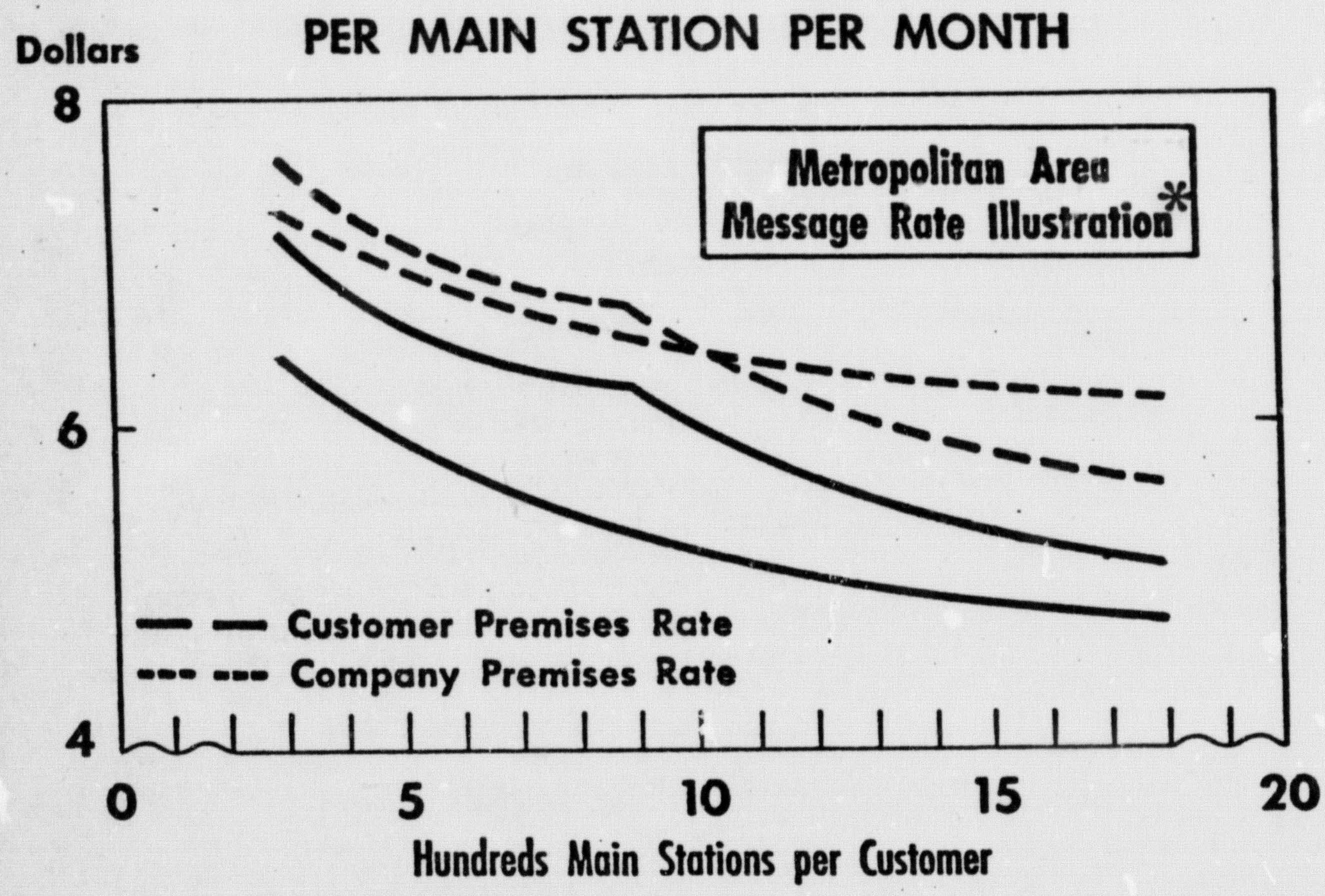
- CENTREX-CO OUTSIDE PLANT COSTS GENERALLY DETERMINE ECONOMIC LIMIT.
- LIMITED AREA WILL REDUCE MAIN STATION RATE BUT INCREASE NUMBER OF CASES REQUIRING SPECIAL TREATMENT.
  - MAY ADVERSELY AFFECT DEVELOPMENT.
  - INCREASES BOUNDARY ADMINISTRATIVE PROBLEMS.
- CONFORMING WITH PRESENTLY ESTABLISHED BOUNDARIES (CENTRAL OFFICE, BASE RATE) SHOULD HELP AVOID COMPLICATIONS.
  - MAY SEEM MORE REASONABLE TO CUSTOMERS AND COMMISSIONS THAN SPECIALLY ESTABLISHED BOUNDARIES FOR ONE SERVICE.
- AVERAGE STATION LOOP OF 1.5 MILES (MAXIMUM OF 2.5 FROM CENTRAL OFFICE) WILL GENERALLY COVER THE BASE RATE AREA IN SINGLE OFFICE EXCHANGES AND THE CENTRAL OFFICE DISTRICT IN MULTI-OFFICE EXCHANGES AT REASONABLE COSTS.

PROTECTED

E286
Exhibit 14

Centrex revenue requirements ....

Related To Average Rates



* Revenue requirements based on average system costs, plus trunks at going rate levels. Rate levels based on one operating Company's existing rate schedules and estimated Centrex development.

PROTECTED

E287
Exhibit 14

Rates for console and 608A switchboard should be at the same level . . . .

- COMPANY HAS MAXIMUM LATITUDE TO DETERMINE MOST APPROPRIATE TYPE OF POSITION.
  - TRAFFIC OBJECTIVE IS TO USE CONSOLE WHEREVER THERE IS A CHOICE.
- CUSTOMERS MORE LIKELY TO ACCEPT COMPANY RECOMMENDATIONS WHEN PRICE IS NOT A PRIME CONSIDERATION.
- SIMPLIFIES ADMINISTRATION AND CUSTOMER UNDERSTANDING WHEN CENTREX POSITIONS ARE PRICED THE SAME AS 608's WITH CONVENTIONAL DIAL SYSTEMS.
  - FACILITATES CHANGE TO CENTREX SERVICE.
- REVENUE REQUIREMENTS IN EXCESS OF POSITION RATE CAN BE INCLUDED IN STATION CHARGE.
  - MAIN STATION RATE IS LOWERED TO EXTENT CONSOLE IS PRICED UP TO 608 LEVEL.
- SOME CUSTOMERS MIGHT NOT BUY PRIVATE TIE LINES, ETC., IF CONSOLES WERE PRICED BELOW 608's.

PROTECTED

E288
Exhibit 14

Monthly revenue requirements of switching equipment for fully-restricted telephone - Centrex-CO....

REFERENCES:

RATE DEVELOPMENT CONSIDERATIONS - SECTION IV, ATTACHMENT 6, ENGINEERING STUDY - PAGES 16 and 18.

INVESTMENT	COST PER MAIN STATION
CENTRAL OFFICE EQUIPMENT	
COMPLETING MARKER	$13.20
DIAL TONE MARKER	3.00
ORIGINATING REGISTER	10.20
LINE AND TRUNK LINK FRAME (3.0 x $13.75)	41.25
NO. GROUP APPEARANCE	6.00
INTRAOFFICE TRUNKS	10.00
TOTAL	$83.65
LAND AND BUILDING (20% OF C.O.E.)	$16.73
ANNUAL CHARGES	
C.O.E. @ 28%	$23.42
LAND AND BUILDING @ 24%	4.02
TOTAL	$27.44
MONTHLY CARRYING CHARGE	$ 2.29

PROTECTED

E289
Exhibit 14

Factors not evaluated in revenue requirements study ....

- **POTENTIAL SAVINGS**

  ELIMINATION OF OPERATOR COSTS FOR "TIME AND CHARGE" AND OTHER TICKET DETAILS.

  EXTENSION BILLING SHOULD ENCOURAGE DDD - LESS OPERATOR HANDLING.

  SHIFT FROM PERSON-TO-PERSON TO STATION-TO-STATION

  REDUCED CIRCUIT HOLDING TIME SHOULD SAVE TRUNK PLANT, SWITCHING EQUIPMENT AND OPERATOR WORK TIME.

- **POTENTIAL ADDED COSTS**

  PREMATURE RETIREMENT OF DIAL PBX EQUIPMENT DUE TO CENTREX-CO.

  ADVANCEMENT OF NEW AREA CODES.

- **STUDY APPROACH**

  POTENTIAL SAVINGS OFFSET POTENTIAL ADDED COSTS.

PROTECTED

E290
Exhibit 14

A new service connection charge schedule is needed for Centrex service to ....

- HELP REINFORCE POSITION THAT CENTREX IS DIFFERENT FROM REGULAR BUSINESS EXCHANGE OR PBX SERVICE.
- SIMPLIFY RATE STRUCTURE BY "PACKAGING" SERVICE CONNECTION AND INSTALLATION CHARGES.
  - MORE READILY UNDERSTOOD BY CUSTOMERS THAN SEPARATE CHARGES.
  - "BUILDS-IN" DESIRABLE FEATURES OF INSTALLATION CHARGES.
- FACILITATE UNIFORM RATE TREATMENT FOR CENTREX-CU AND CENTREX-CO.

AT LEVELS. . . .

- LOWER THAN EXISTING BUSINESS LINE BUT HIGHER THAN PBX EXTENSION.
- GRADUATED TO CONFORM WITH EXISTING S.C.C. SCHEDULES.
- WHICH WILL APPLY TO EACH MAIN, BRIDGED AND FULLY-RESTRICTED TELEPHONE.

PROTECTED

E291
Exhibit 14

Termination liability objectives . . . .

- PROTECT ORIGINAL INVESTMENT.
    - COMPLETE DISCONNECT.
    - SUBSTANTIAL REDUCTION IN STATIONS.
- PROTECT INVESTMENT IN THE EVENT OF SUBSTANTIAL ADDITIONS.
- AVOID ARTIFICIAL ARRANGEMENTS.
- KEEP ADMINISTRATION SIMPLE.

PROTECTED

E292
Exhibit 14

Termination liability considerations - I....

PROTECTION OF ORIGINAL INVESTMENT IN THE EVENT OF COMPLETE DISCONNECT:

- SHOULD COVER POSITIONS AND SWITCHING EQUIPMENT BUT NOT STATIONS AND TRUNKS
- SHOULD COVER NON-RECOVERABLE PORTIONS ONLY
- NOT AS MUCH PROTECTION NEEDED ON CENTREX-CO AS ON CENTREX-CU, BUT SHOULD TREAT BOTH THE SAME
- TERMINATION CHARGE SHOULD COVER ONLY THOSE PORTIONS IN SERVICE FOR LESS TIME THAN CONTRACT PERIOD

PROTECTED

E293
Exhibit 14

Termination liability considerations - II....

PROTECTION OF ORIGINAL INVESTMENT IN THE EVENT OF SUBSTANTIAL REDUCTION IN STATIONS:

- SHOULD PERMIT ADDITION AND SUBTRACTION OF STATIONS WITHIN LIMITS OF NORMAL CUSTOMER-NEED FLUCTUATIONS.

- SHOULD AVOID SUDDEN APPLICATION OF LARGE FIXED CHARGE WHEN A PREDETERMINED STATION LEVEL IS REACHED.

- SHOULD ALLOW CUSTOMER TO DECREASE PENALTY BY RECONNECTING STATIONS.

  IN MANY CASES SWITCHING EQUIPMENT WILL REMAIN IN PLACE - PARTICULARLY ON CENTREX-CO.

- MINIMUM SYSTEM CHARGE (300 STATIONS) SHOULD PROVIDE LOWER LIMIT.

- ALTHOUGH "DOLLAR AMOUNT" PLANS MAY APPEAR LESS COMPLICATED, A "REVENUE GUARANTEE" PLAN SEEMS MORE APPROPRIATE.

PROTECTED

E294
Exhibit 14

Termination liability considerations - III....

PROTECTION OF INVESTMENT IN THE EVENT OF SUBSTANTIAL ADDITIONS:

- IT WOULD SEEM REASONABLE TO EXPECT SIMILAR PROTECTION FOR THE ADDITION OF SEVERAL HUNDRED STATIONS AS FOR THE ESTABLISHMENT OF A NEW SYSTEM WITH SEVERAL HUNDRED STATIONS.
- THE EQUIPMENT INCREMENT NEEDS INVESTMENT PROTECTION EVEN THOUGH THE CONTRACT PERIOD MAY HAVE EXPIRED ON THE EQUIPMENT ORIGINALLY INSTALLED.

  LIFO (LAST IN, FIRST OUT) PRINCIPLE WOULD SEEM TO MEET THIS OBJECTIVE.
- SHOULD PERMIT ADDITION AND SUBTRACTION OF STATIONS WITHIN LIMITS OF NORMAL CUSTOMER-NEED FLUCTUATIONS.

PROTECTED

E295
Exhibit 14

Termination liability considerations - IV....

AVOID ARTIFICIAL ARRANGEMENTS:

- TERMINATION LIABILITY ARRANGEMENTS SHOULD NOT ENCOURAGE CUSTOMER TO RETAIN UNNEEDED STATIONS THAT ARE BASICALLY IN HIS WAY.
- CUSTOMER SHOULD NOT BE ENCOURAGED TO CUT OVER WITH LESS STATIONS THAN HE NEEDS , IN ORDER TO GET A LOW-BASE TERMINATION CONTRACT.

  WOULD HAPPEN IF BASED ONLY ON STATIONS FURNISHED AT CUT OVER.
- A REVENUE-GUARANTEE ARRANGEMENT SHOULD NOT ENCOURAGE A MULTI-LOCATION CUSTOMER TO MOVE STATIONS BEFORE DISCONNECTING THEM.

PROTECTED

E296
Exhibit 14

Termination liability considerations - V....

SIMPLIFY ADMINISTRATION:

- ALLOW ENOUGH "NORMAL-FLUCTUATION" LEEWAY TO AVOID HAVING TO GET NEW CONTRACTS TOO OFTEN.
- BASE TERMINATION LIABILITIES ON TOTAL STATIONS IN MULTI-LOCATION SYSTEMS EVEN THOUGH PROTECTION MIGHT BE APPROPRIATE AT EACH LOCATION INDIVIDUALLY.
- BILL ALL REVENUE GUARANTEES FOR DISCONNECTED STATIONS AT CHEAPEST STATION RATE THAT CUSTOMER WOULD BE ENTITLED TO AT ANY ONE OF HIS LOCATIONS.

PROTECTED

E297
Exhibit 14

Termination liability example -I....

AT CUTOVER:

NUMBER OF UNRESTRICTED MAIN STATIONS - 770
ROUNDED DOWNWARD TO NEAREST HUNDRED - 700
APPLYING 90% FACTOR - 630

- MINIMUM REVENUE GUARANTEE IS, THEREFORE, FOR 630 UNRESTRICTED MAIN STATIONS FOR THREE YEARS.

WHEN SUBSEQUENT GROWTH REQUIRES NEW CONTRACT:

NUMBER OF UNRESTRICTED MAIN AT CUTOVER - 770
ROUNDED UPWARD TO NEAREST HUNDRED - 800
ALLOWING EXTRA 20 UNRESTRICTED MAIN STATIONS - 820

- NEW CONTRACT NOT PREPARED UNTIL UNRESTRICTED MAIN STATIONS EXCEED 820.

PROTECTED

E298
Exhibit 14

Termination liability example - II. . . .

ADMINISTRATION OF SUBSEQUENT CONTRACT:

INCREASE UNRESTRICTED MAIN STATIONS TO - 821
ROUNDED DOWNWARD TO NEAREST HUNDRED - 800
APPLYING 90% FACTOR - 720

- NEW MINIMUM REVENUE GUARANTEE IS, THEREFORE, FOR 720 UNRESTRICTED MAIN STATIONS FOR 3 YEARS FROM DATE OF ADDITION THAT BROUGHT STATIONS TO 821.
- THIS FOLLOWS THE "LIFO" PRINCIPLE AND WOULD APPLY EVEN IF SOME OF THE 821 STATIONS HAD ALREADY BEEN IN SERVICE FOR 2 YEARS ALREADY.

COMPLETE DISCONNECT:

(ASSUME ORIGINAL INSTALLATION WAS IN SERVICE FOR 2 1/2 YEARS AND 821ST STATION IN SERVICE 6 MONTHS.)

BILL FOR 40% OF 6 MONTHS STATION REVENUE - 630
BILL FOR 40% OF 30 MONTHS STATION REVENUE - 90

- BILLING FOR ABOUT 40% RATHER THAN 100% OF REMAINING STATION REVENUES GIVES ALLOWANCE FOR THE FACT THAT THE STATION RATE PACKAGE INCLUDES STATIONS, TRUNKS, ETC. FOR WHICH THERE IS GENERALLY ONLY A 30 DAY MINIMUM FOR CONVENTIONAL PBX CUSTOMERS.

PROTECTED

E299
Exhibit 14

Considerations in establishing rate treatment for Centrex stations at secondary locations....

- IDENTICAL RATE TREATMENT NEEDED FOR CENTREX-CU AND CENTREX-CO IF COMPANY IS TO HAVE FLEXIBILITY TO DECIDE SERVING METHOD.
- NO SUPPORTABLE BASIS FOR APPLYING MILEAGE CHARGES TO CENTREX-CO OFF-PREMISES STATIONS.
  - FOR CENTREX-CU, SERVING ARRANGEMENTS AND COSTS FOR OFF-PREMISES STATIONS ARE SAME AS FOR SIMILAR STATIONS ON CONVENTIONAL PBX'S.
- RESTARTING SCHEDULE AT HIGHEST RATE AT SECONDARY LOCATION SHOULD COMPENSATE FOR OFF-PREMISES MILEAGE IN THE SAME CENTRAL OFFICE AREA.
  - COMPANY HAS OPTION OF FURNISHING OFF-PREMISES STATIONS OR A SATELLITE SWITCHING SYSTEM WITH TIE LINES.
- ADDITIONAL CHARGES ARE REQUIRED TO COVER HIGHER PLANT COSTS WHEN SECONDARY LOCATION IS OUTSIDE BASE RATE AREA OR IN ANOTHER CENTRAL OFFICE.
- SHOULD BE RECOGNIZED THAT COMPANIES MAY REQUIRE ADAPTATIONS TO MESH CENTREX HANDLING WITH EXISTING MILEAGE REGULATIONS.

PROTECTED

E300
Exhibit 14

Suggested method of applying station rate schedule to multi-location Centrex customer in basic Centrex offering area . . . .

- WITHIN A CENTRAL OFFICE BASE RATE AREA, THE XYZ COMPANY HAS:

  AN OFFICE BUILDING WITH 835 STATIONS,
  A FACTORY ACROSS TOWN WITH 150 STATIONS, AND
  AT A THIRD LOCATION A DISPATCHER'S OFFICE WITH 15 STATIONS.

- CENTREX SCHEDULE II WOULD BE APPLIED AS FOLLOWS:

  MAIN OFFICE BUILDING:

  50 STATIONS @ $10. 75
  250 STATIONS @ 10. 25
  535 STATIONS @ 7. 75
  835

  FACTORY:

  50 STATIONS @ $10. 75 *
  100 STATIONS @ 10. 25 *
  150

  DISPATCHER:

  15 STATIONS @ $10. 75 *

  * MILEAGE CHARGES WOULD NOT APPLY.

PROTECTED

101
Exhibit 14

Suggested method of applying station rate schedule to multi-location Centrex customers with some service outside basic Centrex offering area ....

- WITHIN A CENTRAL OFFICE BASE RATE AREA, THE XYZ COMPANY HAS:
  AN OFFICE BUILDING WITH 835 STATIONS.
- OUTSIDE THE CENTRAL OFFICE BASE RATE AREA, THEY HAVE:
  A FACTORY WITH 150 STATIONS, AND
  AT ANOTHER LOCATION A DISPATCHER'S OFFICE WITH 15 STATIONS.
- CENTREX SCHEDULE II WOULD BE APPLIED AS FOLLOWS IF FACTORY AND DISPATCHER WERE LOCATED IN AN AREA WITH:

	MEASURED MILEAGE TREATMENT	FLAT RATE MILEAGE TREATMENT
MAIN OFFICE BUILDING:	50 STATIONS @ $10.75	50 STATIONS @ $10.75
	250 STATIONS @ 10.25	250 STATIONS @ 10.25
	535 STATIONS @ 7.75	535 STATIONS @ 7.75
	835	835
FACTORY:	50 STATIONS @ $10.75 *	65 STATIONS @ $ 7.75 #
	100 STATIONS @ 10.25 *	85 STATIONS @ 5.00 #
	150	150
DISPATCHER:	15 STATIONS @ $10.75 *	15 STATIONS @ $ 5.00 #

* TARIFF MILEAGE CHARGES WOULD APPLY (ON A PER CIRCUIT BASIS).

OFF-PREMISES STATIONS WOULD BE MEASURED AIRLINE TO NEAREST POINT ON PRIMARY LOCATION BOUNDARY.

TIE LINES WOULD BE MEASURED AIRLINE BETWEEN SERVING CENTRAL OFFICES.

TARIFF FLAT RATE MILEAGE CHARGES WOULD APPLY (ON A PER CIRCUIT BASIS).

PROTECTED

E302
Exhibit 14

The rate approach to Centrex-CU and -CO differs at three points . . . .

1. CUSTOMERS OUTSIDE BASE RATE AREA INCUR MILEAGE CHARGES ON A PER CIRCUIT BASIS.

   ENCOURAGES THESE CUSTOMERS TO BUY CENTREX-CU.

   HELPS MEET ENGINEERING RECOMMENDATION TO AVOID CENTREX-CO WITH EXTRA LONG LOOPS.

2. TERMINATION CHARGES WOULD APPLY TO CONVENTIONAL SxS-TYPE PBX CUSTOMERS CHANGING TO CENTREX-CO.

   BY ENCOURAGING THESE CUSTOMERS TO BUY CENTREX-CU THE REVENUE-PRODUCING VALUE OF MUCH PBX EQUIPMENT IS PROTECTED.

   GUARDS AGAINST DISPLACEMENT OF EXISTING SxS-TYPE PBX EQUIPMENT WHICH STUDY ASSUMED WOULD BE REUSED IN PLACE.

3. CENTREX-CO RATES WOULD BE SLIGHTLY HIGHER THAN CENTREX-CU.

   REPRESENTS VALUE TO THE CUSTOMER OF FLOOR SPACE AND POWER FURNISHED BY COMPANY.

   AVOIDS DISCRIMINATION BETWEEN CUSTOMERS FURNISHED ESSENTIALLY SAME SERVICE BY TWO DIFFERENT METHODS.

PROTECTED

E303
Exhibit 14

A specific tariff should be filed for Centrex service . . . .

- A SPECIFIC TARIFF, SEPARATE AND DISTINCT FROM EXISTING PBX TARIFFS, SEEMS DESIRABLE.

  CENTREX IS A NEW SERVICE CONCEPT.

  IN MANY COMPANIES, THE "PACKAGE" RATE TREATMENT WILL BE NEW.

- TARIFF SHOULD DESCRIBE THE BASIC OFFERING IN TERMS OF THE SERVICE FEATURES RATHER THAN THE EQUIPMENT USED.

- TARIFF SHOULD CONDITION OFFERING UPON THE AVAILABILITY OF FACILITIES AND RESERVE TO THE COMPANY THE RIGHT TO DETERMINE WHERE EACH TYPE OF CENTREX SERVICE (CU OR CO) WILL BE OFFERED.

PROTECTED

E304
Exhibit 14

What can be done with existing "in-dialing" tariffs or pending customer commitments . . . .

- SEVERAL COMPANIES HAVE BEEN SUCCESSFUL IN TAILORING NEW CENTREX RATES TO FIT EXISTING BILLINGS OR COMMITMENTS.
- "FREEZE" CURRENT OFFERINGS AND FILE NEW CENTREX TARIFF.
    - CHANGE TO CENTREX RATES IF CUSTOMER MOVES TO NEW ADDRESS OR REQUIRES SUBSTANTIAL CHANGE OR ADDITION.
- NOTIFY CUSTOMERS ON SPECIAL ASSEMBLY TREATMENT THAT CHANGE TO CENTREX RATES WILL BE EFFECTIVE AT FUTURE DATE - USUALLY ON EXPIRATION OF EXISTING CONTRACT PERIOD.
- REVISE QUOTATIONS NOT YET ACCEPTED OR WHERE INSTALLATION WORK HAS NOT STARTED.
- OBJECTIVE SHOULD BE TO AVOID HAVING LOW CURRENT RATES FOR A FEW EXISTING INSTALLATIONS INFLUENCE NEW CENTREX LEVELS.

PROTECTED

E305
Exhibit 14

The size of the market ....

- PBX CUSTOMERS ARE OUR LARGEST INDIVIDUAL USERS.
- INVESTMENT IN PBX'S IS OVER HALF BILLION DOLLARS.
- 25% OF TOLL CALLS ORIGINATE AND 35% TERMINATE AT PBX'S.
- LARGE VOLUME OF LOCAL CALLS ARE TO PBX EXTENSIONS.
- OVER 75% OF TOLL TRAFFIC ORIGINATED AT PBX'S INVOLVES PERSON-TO-PERSON AND/OR TIME AND CHARGE HANDLING.
- THERE ARE ALMOST AS MANY PBX ATTENDANTS AS BELL SYSTEM OPERATORS.

PROTECTED

E306
Exhibit 14

PBX systems in service 1-1-60 ....

RANGE IN EQUIPPED LINES	NUMBER OF P.B.X. SYSTEMS
0 - 30	81,735
30 - 100	65,295
100 - 200	9,237
200 - 500	5,067
500 - 1,000	1,143
OVER - 1,000	464
	162,941

NUMBER OF P.B.X. TRUNKS	1,224,830
NUMBER OF P.B.X. STATIONS	7,863,206

Potential ....
8 million PBX stations ....

PER CENT OF TOTAL STATIONS	P.B.X. SYSTEM SIZE
7%	1,000 OR MORE STATIONS
10%	500 - 1,000 STATIONS
20%	200 - 500 STATIONS
63%	200 - OR LESS STATIONS

PROTECTED

E307
Exhibit 14

Are suggested Centrex rates salable ? . . . .

OF ONE COMPANY'S PBX CUSTOMERS (300 OR MORE STATIONS) STUDIED:

. . . 24% could buy Centrex and save money *

WHILE . . . .

. . . 8% would have to buy-up 10%

25% would have to buy-up 20%

25% would have to buy-up 30%

10% would have to buy-up 40%

AND . . . .

. . . 8% would have to buy-up more than 50%

* Overall communications bill including P.B.X. attendant costs.

PROT TED

E308
Exhibit 14

Items still under consideration . . . .

- RATE TREATMENT FOR OFF-PREMISES FULLY-RESTRICTED STATIONS.
- RATE TREATMENT FOR OFF-PREMISES BRIDGED STATIONS.
- RATE TREATMENT FOR LOCALITY RATE AREAS.
- RATE TREATMENT FOR SERVICE CONNECTION CHARGES APPLIED TO CUSTOMER GOING FROM CENTREX-CU TO CENTREX-CO.
- RATE TREATMENT FOR MIXED SYSTEMS TO RECOGNIZE TRAFFIC TO OR FROM CONVENTIONAL STATIONS OVER "FREE" TRUNKS.
- RATE TREATMENT OR ALTERNATE EQUIPMENT ARRANGEMENTS FOR SHORT-LIFE ATTENDANT POSITIONS NEEDED BY CUSTOMER WHEN CENTREX SERVICE IS INTRODUCED.

PRO TED

E309
EXHIBIT 15
Chesapeake and Potomac employee's notes regarding
May 17 and 18, 1961 meeting

5-17-61

CENTREX

Smith

Rates will differ but should be on same basis throughout System.

Alternatives throughout - choice of method made after discussion with all Companies.

1. Suggested rate treatment embodies new approach in rate making.
   Marketing and Engineering approach [illegible] important.
   Engineering, Traffic, and Marketing all advising their Groups of detailed information on Centrex.

Page 1

1.
2. Added 8% current cost - attempt to raise return on present P.B.X. equipment.
3. Ultimate to replace all P.B.X. service.
4. P.A.X. systems - restricted and bridged stations.
5. Centrex C.O. causes this.
6. Very important - economically for future.
7. Important.

AINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
15 4

Page 2

Page 3

Page 4 Centrex C.U. subsidizes Centrex C.O.

Page 5 Cost was necessary for Chicago Commission.
Traffic study 1957 - sliding scale for C.C.S.'s.

Page 6 Trunks - Estimate made of number of trunks to be needed to provide adequate service to customers.
Use trunk charges not Revenue Requirements - cannot use Centrex to improve earnings on Trunks - Discrimination.

PROTECTED

Page 7

E310
Exhibit 15

Page 8 Traffic savings - switches - etc.

General savings over System.

Calling characteristics in - out - i.e., increased as you get smaller.

Minimum to help orderly introduction.

Page 9 More bridges required - Company must add additional trunks and switches - this cost is factored in bridged station rate.

Page 10 Centrex C.O. - cost for cable for fully restricted stations brings up cost. Question Centrex C.U.

Page 11

Page 12 A.N.I.

Question should Centrex C.O. and Centrex C.U. be at the same rate, both including A.N.I. cost, when we cannot furnish A.N.I. to C.U. customers for three years?

Detailed billing of MU on a per station basis? Or bulk billing?

Page 13

	A # Sta.	B # Sta.	C # Sta.	
Has	100	100	100	300
Would Pay	300	100	100	50

Treat each location separately - same C.O. area.

Schedule applies to all buildings on same continuous property.

Customer with 200 main and 200 restricted would pay - 300 main rate 100 restricted rate.

Page 14

Page 15 Possible consider weighted average based on number of trunks required for each customer - develop central charges.

Page 19 Cost for 608 includes cost for release loop operation and Call Distributor.

Transfer feature without Call Distributor yes!

So why include.

PROTECTED

E311
Exhibit 15

Page 20

Page 21

Page 23 Termination charge applicable if customer goes from Dial P.B.X. to Centrex C.O.

No termination charge applicable for converting from Dial P.B.X. to Centrex C.U.

5-18-61

Letter 9-20-60 - Mapes

No. 5 - Crossbar System used with Centrex

Auker

Step Office - Centrex C.O.

Can use step-by-step to provide Centrex C.O.

Problem applying console arrangements with step equipment.

No line limitation on Automatic Call Distributing Traffic and number trunks only limit.

Tie Line Tandem - problem - Davis looking into.

No. 1 step office can be used to provide Centrex C.O. also centralized 701 equipment.

Cost about the same as number 5 K Bar.

Page 31 Problem with Centrex C.O. on satellite operation when satellite location is in other C.O. area - transfer requires extra switchboard at satellite location to handle transfer.

Chicago has set designed to provide transfer arrangement at satellite location - 4623 cost 6 button set.

Page 33 Apply existing off premises mileage rates on a per circuit basis.

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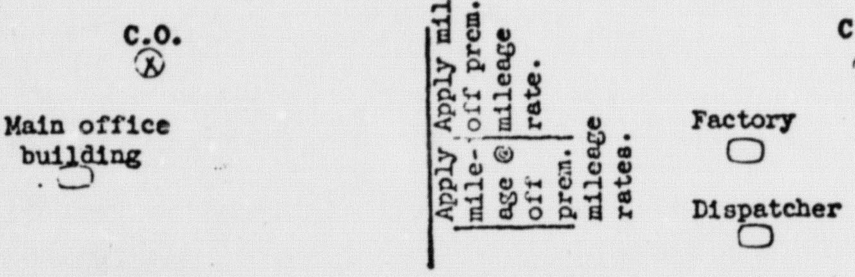
E312
Exhibit 15


C.O.
Main office building
Apply mileage @ off prem. mileage rate.
Apply mileage @ off prem. mileage rates.
C.O.
Factory
Dispatcher

(Use when setting up Flat Rate charge for Centrex)

Alternative - if C.O. boundries are not defined you can measure C.O. to C.O. less administrative problems.

Question application of Flat Rate mileage at this time o.k. good time to do it. Why not for all C. & P. Companies?

Page 33 Small size satellite very important - i.e., charge for 15 circuits versus charge for 3-4 trunks.

No tie line terminal charges applicable in same C.O. area.

If satellite location outside B.R.A. terminal charges applicable.

Question of satellite operation is do you charge for all tie lines or do you only charge for intercom tie line.

In some cases customer may request 2 number systems which we do not want to provide.

Ohio - proposed a certain rate per station regardless of whether the stations are off-prem or satellite. This permits the Telephone Company to determine method and gives us the flexability. Applicable only to adjacent C.O. area.

This prevents discriminatory treatment to customers who are forced to take P.B.X. off prem versus tie line and satellite.

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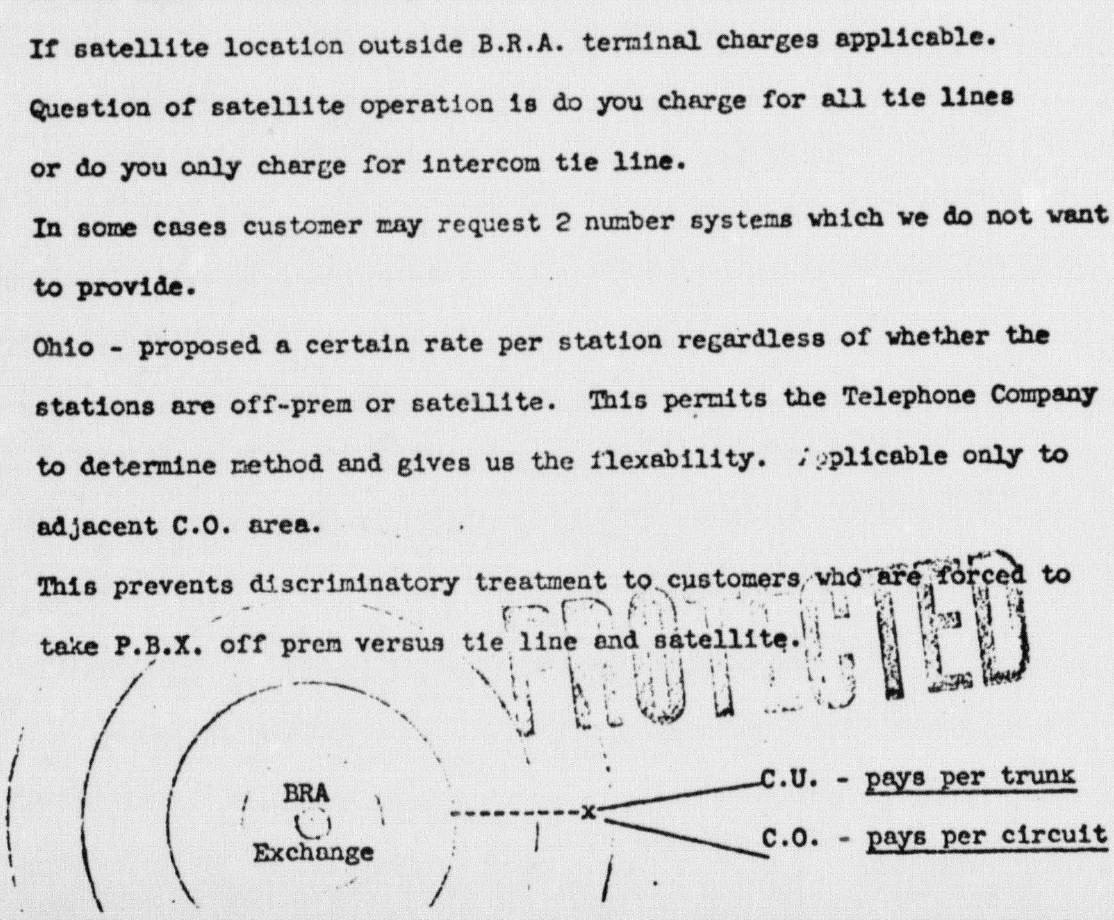
Page 34


BRA
Exchange
C.U. - pays per trunk
C.O. - pays per circuit

E313
Exhibit 15

Build into rate for junking of 701 position.

Page 35 Legal question re. provision of Centrex C.O. in a Wire Center area if you provide this service to one customer within the C.O. area, legally you must provide this service to all other customers who request it if they are within the same Central Office area. The only out you have is a facility problem (real or imagined). Interdepartmental committee to review candidates to decide method of serving and when.

Page 36 Suggest applying to all existing indialing.

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E314

EXHIBIT 16

Southern New England employee's notes regarding
May 17 and 18, 1961 meeting

Notes - Centrex Rate Meeting
AT&T Co. - May 17-18, 1961

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PLAINTIFF
EXHIBIT
U.S. DIST. COURT
S.D. OF N.Y.
16.

General

All companies should key to Centrex rate pattern as developed by task force.

However, rate levels should be determined for each state, based on equipment, trunk rates, etc. which apply there.

Marketing plans and program due to be released July 1 (Bill Brown).

References:
- Charts from Centrex Rate Meeting
- Centrex Service Rate Development Considerations - April 1961
- Centrex - Development of Monthly Revenue Requirements - March 1961, with letter of March 24, 1961 from Ostergren

Above references contain much policy material and are not for general publication.

Chart 1

Chart 2

Switchboards are separate package from Centrex service, because switchboards are complicated and expensive, and may change radically in design, so latitude in rates needed. Also, if we dictate the number of positions, we obligate subscriber to provide operators he may not otherwise choose to provide.

Chart 3

Station Identification by manual operator, CAMA or ANI

Subscriber may choose machine or attendant intercept, but we charge extra if he wants both. ←

Chart 4

Bell System has investment of $600,000,000 in present PBX equipment, which must be conserved under Centrex.

Chart 5

Legal opinion is that we file in tariffs our right to choose type of Centrex in any case, but if we give one subscriber in a wire center Centrex - CO., we cannot finally refuse others in same wire center. So be careful about letting first subscriber get - CO. in any wire center.

A change charge (penalty) for PBXs would apply on change from 701 to - CO, but not to - CU. This should help resist - CO if we needed

E315
Exhibit 16

Rate level must reflect plans and policies for proportion of -CO and -CU we anticipate.

File as "service", not type of facility.

Don't designate as - CO and - CU in tariffs.

Market people will have to check with Engineering, and Traffic before talking to customers on Centrex. A designated committee should review all PBX sales in advance, develop program and be available to consider demand cases. Plant Engin

← [illegible]

Chart 6

Use mix of High CCS and low CCS PBX's.

Need traffic estimate for number of trunks, etc. Traffic

Note that Page 16 of Revenue Requirements book calculates cost for incoming and outgoing traffic to be $4.10 /sta. /mo. However, Ohio study used a lower figure based on analysis of existing trunk rates. Which should we use?

Smaller PBX's have a larger proportion of in and out calling /sta. than large PBX's, and more trunks /sta.

Refer to 1957 study of PBX usage made by Traffic. Johnson

See Page 55 of Revenue Requirements book.

Chart 7

Chart 8

~~An~~ Our PBX termination charge or change charge plan somewhat weak. Should we include a factor for early retirement of 701 equipment in rate, reflecting likelihood of being forced to change some to - CO where we start - CO in a wire center?

Chart 9

Study % bridged stations in average PBX.

If we have different rates for bridged stations from main in Centrex, and same for both in regular PBX, are we facing trouble? JCT

Chart 10

Rate for bridged station on restricted main station same as for bridged station on unrestricted main station, though might ~~agree~~ argue that cost differs.

Avoid toll diversion if we can.

Fully restricted station's rate can be above PAX cost, and still compete for a number of reasons.

PROTECTED

E316
Exhibit 16

If we have different rates for fully restricted stations from main in Centrex, and same for both in regular PBX, are we facing trouble?

Chart 11

Do we have to offer fully restricted service?

Chart 12

Consider change in special toll billing rate plan. With Centrex, subscriber will buy only if he can't use stations for accounting, ~~and~~ or needs more codes.

Can we continue to charge for special toll billing on non-Centrex? How can we support doing so?

Chart 13

Analyze multi-location subscribers (701 & 711). ¶ Can we offer flat rate Centrex only?

Pick station steps for ENET as best for us. 50-250 - 600 - 900 only illustrative.

Review EL plans ahead before setting schedule breaks between exchange rate groups.

If a subscriber does most of his business over tie lines (as IBM) in proportion to local exchange calling, harder to sell him Centrex.

Rate schedules apply to unrestricted main stations.

A 200 unrestricted, 200 restricted station subscriber would pay for 300 minimum at unrestricted rate and 100 at restricted rate.

Accounting will probably have to keep Centrex ~~registers~~ records and do billing. Too complicated for Commercial field.

Chart 14

Get market estimate first.

Traffic letter from AT&T soon, - may be able to get advance copy to help do job now for us.

Study of base rate area, wire ~~units~~ centers, other outside plant factors needed for average line lengths, etc.

Chart 15

First item covers PBX switching equipment, house cable and station equipment and wiring.

Second item covers expenses in the serving Central office.

PRO[illegible]ION

E317
Exhibit 16

Fourth item indicates revenue requirement for traffic estimate of exchange trunks based on present rate levels, rather than cost. This approach should be reviewed for SNET after comparable data is worked out.

Is $125 the best rate for attendant equipment in SNET? The rate letter for 608-A recommends 125 for regular service. If we decide to adopt a higher figure, should that same figure be used for Centrex?

Chart 16

Chart 17

Complications can be expected when we transfer an area from one wire center to another in an exchange, and especially where we establish a new wire center.

Relate possible plans to our own present tariffs and rate plans. We may not be able to follow the AT&T suggestion because of conflict with our present patterns. Or we may want to change our present patterns.

Chart 18

We should carefully develop similar charts for our own situation.

Chart 19

Release loop operation for 608 will be available as soon as we can get an order, and order and install the equipment.

How does the switchboard for in-dialing at the N.L. Sub. Base differ from the proposed Centrex features? Can we wipe out any of these differences?

Chart 20

Review problems of subscriber comparing Centrex rate plan for fully restricted and for bridged stations with our rates for similar stations with regular service.

Chart 21

With our present change charge for PBXs, do we need to include any factor in Centrex for premature retirement of dial PBX equipment?

Chart 22

Can we justify a service connection charge for bridged Centrex stations different from charge for regular PBX stations?

Chart 23

Admittedly difficult of administration.

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E318
Exhibit 16

Charts 24, 25, 26, 27, 28

We may want to develop a formal termination charge plan for our regular PBX switchboards and dial equipment.

Chart 29

This probably should be simplified. How about not rounding down to nearest hundred before applying the 90% factor?

The 20 station margin is based on assumption customer thinks we add in blocks of 20. Any better plan?

Relate the 3 year suggestion to our 10 year plan. Any problems?

Can we support the 40% figure in the plan to bill for 40% of remaining station revenues for 3 years? Can we write the initial contract to automatically include subsequent additions?

Chart 30

One case:

Subscriber has 500 stations for 10 years.
Adds 300
800
Removes 400 1 year later
300

So liable for 400 working stations plus 300 more for 2 years.

TP It may be possible to use very general terms in the tariff filing for termination charge.

N. Y. Tel. Co. plans to have termination charges on - CU in New York, but not on - CO.

No TD rate.

Review change charges carefully, to and from Centrex. How do the Centrex charges compare with regular change charges, as 756 to 701, etc.?

Charts 31, 32 33

Be sure plan as set up is compatible with our present tariff, or changes, such as flat rate for OPX's, we may adopt. Special training will be required for Accounting and Commercial. TP

How can we prepare for case where a new central office building is introduced in an exchange?

Development is under way for a small sized satellite unit, down to 10 lines.

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E319
Exhibit 16

Can't have - CO for a subscriber, and also a-CU satellite, because of transfer of calls problem, unless a switchboard at the satellite location.

Consider plan for flat charge for each station in another central office area based on cost of equivalent tie lines from the satellite, to preserve our freedom of decision as to whether to provide cable or a satellite.

What about ANI for a small satellite?

Where subscriber is outside BRA, add a zone differential for each "circuit" (trunks if CU, station lines if - CO). We determine the number of trunks for - CU, so customer may argue about paying the zone differential for "so many" trunks.

Tell AT&T what plan we finally decide to adopt for our area. ←

Chart 34

How about our "penalty" charge for changing type of PBX? Can we legally not apply it on change from standard PBX to Centrex - CU.

What about a 608 switchboard for a regular PBX, changed to Centrex?

We wrote sales in regard to Travelers Insurance Company on subject of changing from regular PBX to Centrex - CU.

> "Change of PBX type switching or attendant position charges will apply in accordance with present tariffs".

Chart 35

Can we avoid filing in PBX section of tariffs?

Where in tariffs would we file exchange group limits, and automatic regrouping of Centrex?

"Don't file - "CU" and - "CO". Suggest "Wherever floor space is furnished by the Telephone Company, an additional charge for floor space and power will apply."

Chart 36

Submarine Base is our problem.

Can we sell remaining features at a higher rate?

Can we charge new tariff rates for all added stations?

Can we notify Sub. Base we will change to standard rates at some date in future? Can we possibly change rates at time of a major addition?

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E320
Exhibit 16

What about a standard termination charge plan?

What about different rates for the various types of stations at Sub. Base.

What service connection, move and change charges to apply?

Chart 37

Chart 38

Chart 39

AT&T suggests that 450 /mo. is ~~firm~~ fair loaded figure for savings to customer if he need cover one less switchboard position.

Chart 40

AT&T would like our thoughts at once on these items. ← ? WFR

1. Night charge same as for unrestricted stations, since this is same as would be done at primary location if less than 300 station size. (Would this be hard to live with under competition?)

2. Off premises stations bridged to station at main location. Treat same as 1?

3. Our own basic plan would influence this.

5. Mixed systems are where subscriber~~s~~ wants - CU at main locations, but has satellite where he wants regular PBX 711.

6. N.Y. Tel. Co. allows 3 months before termination charge applies to these short-life positions.

Common equipment for attendant positions comes in 6 position units.

Additional Items

A. How to terminate WATS lines in Centrex?

B. #5 X Bar so expensive for Centrex - CO, study carefully possibility and cost of using #1 S x S central office for - CO. Two companies plan to do this on a "marked print" basis.

C. Also by choice work Centrex - CU out of a #1 S x S office rather than a #5 X Bar, on basis it is much cheaper. This, and B above, if agreed to would permit establishing a lower Centrex rate level.

D. Cable failure for stations from a Centrex - CO installation would kill intercommunication for the subscriber. This would be important factor say, for a hospital.

PRO TED

WFR:ls

E321
EXHIBIT 17
C&P of Maryland employee's notes regarding
May 17 and 18, 1961 meeting

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May 17, 1961 and May 18, 1961

CENTREX

[illegible] Binder - May [illegible]

System Review - A. T. & T. Company - 195 - Room 1600

A. T. & T. Co. - Fred Smith, Tom Davis, Dick Wilson, Al Moore, Bob Kemp, Bill Brown - Marketing, Al Lockhart - Engineering

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
17

A. F. Smith - "Salmon" binder
    Emphasize - binder - "to illustrate method but not to set rate levels."
        - service must tie in with other rates of each company.
        - Companies make own studies
        - But "binder" objectives are important
    - Binder - Complex subject - prepared by task force and sub-task forces - individual companies - and other departments.
    - Principals - had alternatives
        - Problem - make choice of alternatives
        - "So important" for all companies to go down same road
Major Aspects - Why selected one of many alternatives
    - Explain "why" of conclusions
  Suggested rate treatment - Involves fundamentals in rate thinking -
    - past, present and for future
  Why costs method used? - Very important for effective rates to make rates tie in with:
        - Equipment operations
        - Marketing approach
  Many companies have some in - some now have tariffs
  Other departments are active - Eng. material out -
        - #5 expansion and S X S use
        - Traffic - about to get comprehensive package
        - Marketing - Objective of 7-1-61 to issue package

Chart 1 - Basic pricing objectives
    a. Single composite service offering - important regardless of way serve - a new concept but will have to keep after.
        - Not a #5 C.O. service - many still think so.
        - Must hold this line
            - $600M present PBX investment - much in last 10 years - Want to keep, not take out.
    Company rate people-have job if keep at principle and sell concept of "one servicing offering."

5-26 Reviewed - HUP, TLB & W. Lewis

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E322
Exhibit 17

b. Reasonable return on investment - should at least yield as much as company as whole is earning.
Present dial rates - sub-standard - cannot expect to earn on whole and sell - but be working at.

c. High development
- Ultimate - basic PBX market offering by say 1975 -
  - anything else then "special."
    - cannot, however, achieve overnight

d. Meeting competition
Intra use (restricted) stations - Private system very competitive

e. Package rate - Essential for Centrex central office and good anyhow.

f. Systemwide uniformity of rate approach
(Purpose of meeting)
If do so - various companies' rates will be close to each other.

g. Meshed with basic exchange and conventional rates

B. (Tom Davis) Chart 2 - Package Rates - To have few charges and provide high quality service. To be easily understood by customers and not tied to items of equipment. All customer wants is a good service to meet his requirements. Cannot relate Centrex central office to present rate structure. Complete control by Traffic is important with nationwide DDD.

1. Why not package positions? - Minnesota did.
   - Positions - Many new developments
     - future protection of return
     - we have control but involves expense for customer
   (Minnesota - customers ask for more than need. Feel should withdraw)

Chart 3 - Basic offering - Intercept - More customer demand for machine
- Same customer service - CU or CO

Chart 4 - Binder figures - Value of floor space for CO based on customer view of value
Do we want to keep present positions "in"?
Answer - Desirable but;
- Not much of $600M - For service reasons best to provide latest type of position

E323
Exhibit 17

Preserve present dial equipment - If have CO for one customer,
all in wire center should be able to get.
Nothing in revenue requirements to reflect removal of
present PBX equipment

Centrex CO - any space we control
SXS for general customers
Mix CO - 20% and CU 80%

(Chicago - master plan in city to "spot in" #5s - for various
purposes)
Could not live with all customers having a choice

Chart 5 - (Centrex CO - Michigan filed separate tariff)
(Delay in quoting - CO vs CU study - Marketing could give
market estimate - Study CO vs. CU in advance for the market.
- In wire center - if one customer has CO must offer to all
in that wire center.

Chart 6 - Not proper to figure costs always on high CCS basis.
- Could leave trunk costs out and use tariff revenue
- Companies have this lattitude - May lower revenue requirements
- Customer should not pay more than others for same thing.
- Use same costs whether CO or CU
Maryland could have two rate groups - one for message and
one for flat

Dick Wilson - to New York Company - effective 6-1-61

Chart 7 -

A. T. & T. studies show - low customer stations - more in and out calling per station and so use more trunks and CO equipment per station.
- Much more variation than between large and small customers per station for intra-customer calls.
- Customers - Centrex - assume calling pattern as at present

Chart 8 - Initial need of minimum size

- Below 300 stations - per station costs - up rapidly -
whether CO or CU but CO - big costs O.P.
- Mainly due to heavy calling per Main station by
small customers - both local and toll
(No costs loss included for Centrex CO replacing present 701's)

Costs binder - page 55 - shows small systems higher calling -

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E324
Exhibit 17

Chart 9 - Bridged station - do add switches and trunks - but not as many per 100 main stations.
Maryland Rates - establishes principle of all same rate.

Chart 10 - Fully restricted stations

- Rates - based completely on costs
  If lower than costs - unfair competition -
  PAX - claim that other customers subsidize
- Statewide rates - Proposed rate, in competition, feel is competitive
  3.50 on average vs. other 3.00 - We could be high - Due to CO costs for restricted

Bridge on restricted station - same as main restricted station
  Do develop - Bridge station CCS
    To determine - Take comparable systems with and without bridged stations and check CCS's
    - Same for restricted stations

Marketing - Restricted station - competition - if cannot meet - then demand for interconnection.
Get rate as low as possible.

Chart 11 - Why restricted rate higher than bridged?
  Costs more - less side revenue - toll and message
  - special loop for restricted in case of Centrex CO
Non-Centrex - normal - any necessary differential would be so small - not necessary
  With Centrex - Main station rates are just not reasonable for bridged or restricted stations

Chart 12 - Allowance for ANI
  At S X S customer premises - under development
  1965 or later
    + 25¢ to 75¢ per station
If do not include costs now - difficult to sell later
ANI vs. non-ANI - value identical?
  Ans. - If costs not included - customer will be selective
  CO = ANI - so charge higher differential? No
  - Both get same service - one by operator and one automatic
(Plan contemplates only bulk billing of message units - not by stations)

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E325
Exhibit 17

Chart 13 - Proposed rate treatment
Only illustrative - CO differential - may vary - due to cost of floor space -
- 300 minimum - at any one location

3 locations 100 each - pay for 500
1 location 300 stations - others each 100

If same CO	Location A	 B	 C	Total
	100	100	100	300
Pays	300	100	100	500
But first 50 applies -	Here	Here	Here	

Agree - hard to sell - later will have cheaper equipment and can change.

Where F & M offering - only F offering of Centrex contemplated, but no strong view about this.
Ful ~~For~~ takers would be few, if any, for message service

Flat rate schedule - If EAS reclassify - very high rate increase if several schedules
- Maryland probably best to have only one flat schedule for county offices

Rates - Same for all telephones on same continuous property
- A. T. & T. costs include 15¢ per station for outside extensions and T lines on same premises.
- From present tariff revenues rather than costs study.

The only difference in flat and message rates is trunk value difference.

Application of Station Rates	Main	Bridged	Restricted	Total
If	200	100	100	400
Pay for	300	100	100	500

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Chart 14 - Revenue requirements - basic considerations
Potential market - from Marketing
Number - size and location
(Need interdepartmental committee)
Traffic characteristics - various sizes - Traffic
('57 study may be good enough to use)
Proposed Traffic letter very detailed
Est. CO & CU mix
CU - mix by types of CO equipment
Handling of outgoing traffic - Traffic Department engineers

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E326
Exhibit 17

Chart 14 - (Continued)

Size of basic serving area
    - Effect on outside plant costs
Desirable number of Centrex rate groups
    Maryland - only two - flat and message
                        - EAS problem otherwise -
                        (~~Misc.~~ this way)
                        Wisconsin

Chart 15 - Centrex CU - Rate approach
(Eng. binder - Page 34 basic
                Page 48 = Centrex features)

Chart 16 - Centrex CO - rate approach
New York - 608A rates - about $150

Chart 17 - Size of Centrex BRA?
    Area transfer - leave where is - or if problem - may
                    not make area transfer

Chart 18 - Centrex revenue requirements curves

Chart 19 - Console & 608A
Not necessary to take out old positions - If customer wants
to keep - OK ?
    - Have all new systems - 608 or console
Old - no release loop operation so need more positions -
    one cord pair per call up - unless "special assembly"
                                basis for release loop
                                operation.

Chart 20 - Fully rest. station requirements

Chart 21 - Items Not in costs at all
Savings offset costs - Almost impossible to measure
(Still could sell QZ - codes for departments)

Chart 22 - SCC schedule
Ohio - Plans for Centrex
    - no change over present rates
    SCC - main extension, moves and changes in Ohio -
        all same now.
Maryland - Bridged station SCC - same as move or change charge?
Could use present nonrecurring charges?
= or except for main connections

E327
Exhibit 17

Chart 23 - Termination charge

(Figure rates based on Centrex CU only?)

Start of termination assumes that now have 5 year termination charge

Chart 24 - Termination

Example - see separate statement

(See: 9-20-60 letter and notes - Engineering Letter - Console
#5 Crossbar used for Centrex service
Rate binders - only for people in the rate business)

5-18-61

Al L. (Eng.) - Tie lines with Centrex C.O.
S X S CO - Modifications necessary not yet developed
- Groups of switches for each type of handling
#5 - Class of service for each tie line pattern
(Consoles - Are not limited to 1000 lines)

Where tie lines - doubling up on switching charge?
= A. T. & T. has to study - Tom Davis

Centrex CO - Costs - #5, S X S and #1 about same - S X S could be cheaper

Chart 31 - Secondary locations - Rate considerations
No way yet to have direct in-dialing to satelites for transfers?
In-dial to satelites OK for same CO area

Centrex mileage to other wire centers or outside BRA vs. present mileage tariffs which vary considerably between CO's - so each ~~CO~~ Company must consider

Satelites in same W.C. - for regular main - apply schedule ~~for~~
for restricted? - rate treatment not settled.

Chart 32 - Same wire center - in BRA

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E328
Exhibit 17

Chart 33 - Outside of BRA

For adjacent wire centers - Flat increment per station
(Ohio says 38¢ whether
satelite or OP stations and
no tie line charge)

(What is our satelite situation)

Exchange line mileage - Beyond BRA
Use zone differential for circuits required (in case
of CU - for trunks - not main stations)

Beyond BRA and another CO area
Each CO set up and "check" in what rate treatment is
recommended

Chart 34 - Some companies - charge termination whether CO or CU
- Feel must treat both same way or waive for
both types

701 to CU - where terminating charge paid in part or
in whole can we apply new terminating
charge on same equipment? Probably on only
additional equipment.

Only apply to equipment removed - probably best -
if do not apply terminating charges - put more costs
in rates

Chart 35 - Tariff - specific separate from PBX tariff

In CO area - Have a CO service - spare for others
Sell only CO?

Legally - cannot enforce 100% company option
- Go as far as legal people feel we can - as to
company choice

Each case - at least initially - decide before offering to
customer - whether to be on CO or CU basis
- and only offer one service

Chart 36 - What to do with present tariffs?

Positions - old - Provide switched loop and call distributing
equipment?
605-552 - simpler to replace with 608 or console

Urgency to file? Set up rates for sales but no filing?

Need tariffs -
1. Government - military - requires
2. Government - better if filed
3. Less or no variations if filed
4. We want to sell - Easier with tariff

System very anxious to push!

National adv. soon - need for tariffs

E329
Exhibit 17

Chart 37 - Size of Market

(Government reservations - study all for costs
Each company - Estimate own costs for trunk rate)

Chart 38 - Systems in Service

Chart 39 - Ohio - 70-75 systems studied
Oper. salaries - $450 - includes overhead - S.S. - Pensions and benefits
Floor space - Employment - training

Sales on better service basis rather than where save money only - buy up 8% to 20%
If 20% - would sell 50% of 300 stations or more customer systems

Chart 40 - Still under consideration
Each company to consider - A. T. & T. to be advised
- Assign to someone

Terminating WATS lines - no way to do at present time with Centrex. Must find a way.

~~(Wilson - back to New York Company)~~

15-18 months to provide Centrex - as proposed - if had order now

F. Smith

1. Adopt systemwide uniform rate structure approach - most important
2. Competitive problem
3. Work closely with other departments - particularly Marketing
4. Do not let present commitments control rate structure or rates - A very small part of the ultimate
5. Modify - be willing to do so - with time to get more of market
6. Review plans and rates with A. T. & T. people, before filing

(Ohio has filed - Get copy of tariffs?)

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E330
EXHIBIT 18
April 6, 1961 Michigan Public
Service Commission order

DEFENDANT

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
18

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of MICHIGAN BELL TELEPHONE COMPANY for authority to amend its filed rules, regulations, rates and charges for the provision of Centrex Dial PBX Systems.

Case No. U-539

At a session of the Michigan Public Service Commission held at its offices in the city of Lansing, Michigan, on the 6th day of April, A. D. 1961.

PRESENT: Hon. George E. Hill, Chairman
Hon. Thomas M. Burns, Commissioner
Hon. John E. Tormey, Commissioner

ORDER AUTHORIZING CENTREX DIAL PBX SYSTEMS

On March 13, 1961, Michigan Bell Telephone Company filed an application with this Commission requesting authority to file tariff revisions to cover rules, regulations, rates and charges for the provision of Centrex Dial PBX (Private Branch Exchange) Systems to customers having need for new and improved PBX service.

From the application and the exhibits attached thereto it appears that:

Exhibit 18

1. This Commission, after a public hearing, by order T-252-59.2, dated January 9, 1959, approved a Special Dial PBX System offered only in the Midland, Michigan, exchange base rate area of applicant. This special system provided "in" and "out" dialing for PBX stations. Experience with such system has indicated that the service provides an excellent solution to the communications needs of larger customers where the nature of the calling is such that many inward and outward local and toll calls can be directly dialed. Applicant now proposes to make such service generally available to PBX customers by offering Centrex Dial PBX Systems in all exchanges.

2. Applicant proposes to offer to all business customers their choice of two types of Centrex Dial PBX Systems. One type, known as Centrex-Co Dial PBX Systems, will be furnished by dial switching equipment located in buildings owned or leased by the applicant. The manual switching equipment connected with this type of system will be located on the customer's premises. In the other type known as Centrex-CU Dial PBX Systems both the dial switching equipment and the manual switching equipment will be located on the customer's premises. Different rates and charges will apply to each type of system.

3. Because these systems require substantial plant arrangements, the offering of such systems is subject to the availability

of facilities.

4. A special offering of Centrex-Co will be made to colleges and universities. Colleges and universities will be provided two classes of stations, namely, business and residence. Business stations are provided for the conduct of the administrative functions of the college or university, while residence stations are provided for the living quarters provided by the college or university for students, faculty members or administrative personnel. Business stations for colleges and universities are provided at the rates for Centrex business stations. Residence stations are provided at a rate $0.20 less than the charge for individual residence line flat rate service in the exchange or zone where the service is provided.

5. The principal features of Centrex service are inward dialing which permits incoming local and toll calls to be dialed directly to stations of the system and outward dialing which permits dial stations of the system to dial outgoing calls to local and direct distance dialed points. The service also has station identification which provides for the recording and identification of stations making outward direct distance dialed toll calls and operator handled toll calls.

6. The customer using Centrex service will need fewer switchboard positions because of the direct dialing of calls by

station users. Centrex will provide faster and more efficient inward service. On outgoing toll calls station identification will permit allocation of charges to stations without the necessity of a switchboard attendant ticketing calls. It permits all stations to receive as well as originate calls 24 hours a day, 7 days a week. In addition, with Centrex-Co Systems the customer will not be required to provide floor space for the dial switching equipment which will be located on applicant's premises thereby affecting a customer savings.

7. The applicant avers that the proposed rates and charges will pay all costs and produce a full return on the equipment and facilities which will have to be provided to render these services and the proposed services and the applicable rates and charges will not constitute a burden on applicant's other services or customers as the return on the proposed services will be above the overall return of the applicant.

The Commission having carefully considered the application and being advised in the premises FINDS that the rules, regulations, rates and charges as proposed therein are just, reasonable, in the public interest and that the application should be granted subject to the condition that no existing customers' service will be impaired or rates be increased as a result of this order.

THEREFORE, IT IS ORDERED that Michigan Bell Telephone Company shall prepare and submit to the Commission for approval and filing tariff sheets in substantially the form of the proposed tariff sheets submitted with the application, which application is by reference made a part of this order.

The Commission specifically reserves jurisdiction of the matters herein contained and authority to issue such further orders or order as the facts and circumstances may require.

MICHIGAN PUBLIC SERVICE COMMISSION

/s/ George E. Hill

Chairman

(S E A L)

/s/ Thomas M. Burns

Commissioner

/s/ John E. Tormey

Commissioner

By the Commission and
pursuant to its action
of April 6, 1961

/s/ Norman Berkowitz

Its Secretary

E335
EXHIBIT 19
May 16, 1961 memorandum sent by
S.C. Ramage to R.F. DeButts

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
19

PROTECTED

May 16, 1961

MEMORANDUM TO MR. R. F. DE BUTTS:

At Mr. Goldsborough's request we have reviewed the pink book on Centrex Service, in order to give you our initial reaction. Our comments at this time are necessarily of a broad nature.

The "package" approach to rates is very attractive and should make for easier dealings with our customers. The objective of a reasonably high degree of System-wide uniformity in rates is also attractive and, if accomplished, should make for better customer understanding, acceptance, and relations. The package approach should facilitate prompt quotation of rates. Minimizing differences in service features between CU and CO seems wise. The possibility of furnishing service on a CO basis may cause difficulty in some cases when the economics indicates CU, as many of our customers seem to place a tremendous premium on floor space in their dealings with us. This may be difficult to control in some cases. The absence of a tie-in between cost to the customer and numbers of trunks and switches may give rise to some differences between the Telephone Company and customers as to what constitutes a satisfactory level of service. It would seem rather easy to be critical of service when better service (super service perhaps) comes free of charge. This is probably a small price to pay for the simplicity of rates and the greater flexibility in economical plant provision which should be possible provided we are successful in satisfying our customers with a reasonable quality of service. In the overall, we are quite pleased with the approach being taken.

We are concerned by the problem of meeting the "ultimate objective to make Centrex the standard offering for substantially all customers now in the PBX category." This concern is based on the relationship between cost for Centrex and for conventional PBX service which you furnished us for 10 representative PBX's, using the illustrative American Company rates, which we understand are closely in line with our revenue requirements. Increases in cost over basic PBX service in the range of 38 to 97% (average 61%) for the 10 representative PBX's does not seem conducive to the ultimate objective. Incidentally, we obtained similar figures from the American Company Marketing people on 6 message rate PBX's, where the range of increase was from 59 to 110% (average 79%), and for 3 flat rate PBX's, where the range was from 26 to 40% (33%). (See attachments)

Based on the August 1960 review of PBX customers which your people prepared and the per cent prospect figures on Page 5 of Section VIII Centrex Service, the situation in Maryland would appear as follows:

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Exhibit 19

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			PBX's	
			Total	Number of Prospects
Over	1,000	(100%)	8	8
500 to	1,000	(75%)	14	12
300 to	500	( ) (25%)	28	32
100 to	300	( )	99	
Under	100		108	-
			257	[illegible])

It is realized that the foregoing does not take [illegible] account any savings in the cost of providing attendants which the customer may enjoy as a result of subscribing to Centrex service. Based on the study figures furnished us by you (see attachment) this would appear to be small, as 2 of the 10 representative PBX's would save no positions, 6 of them would save only 1, while the 2 PBX's with over 3,000 stations would save 2 and 3 respectively.

In discussing this situation with the American Company Marketing people they told us that they had received from the American Company Rate people a statement of increased cost to the customer factoring in savings in cost for attendants. These figures are shown on one of the attachments. With these savings factored in, the percentage increase in cost for Centrex was brought into a quite reasonable range. However, you will note that the assumption was made that there would be a reduction of one position for each 200 main stations and that the savings per attendant would amount to $450 per month. These two assumptions, especially the first, appear quite extreme. However, if the situation in attendant savings ever approximates those just mentioned it casts an entirely different light on the situation. While this is a question which needs further explanation, I think it is almost a certainty that our figures will be closer to the situation, especially when we realize that only 29 of the 257 Maryland PBX's shown in the foregoing tabulation have more than 3 positions, and that the average number of positions for these 29 is only 6.5

I find myself somewhat on the fence with respect to the desirability of folding into the rate for Centrex the deficiency which I understand exists in our current rates for conventional PBX service. If I could feel that we would rapidly get our customers over to a Centrex basis I believe I would be very much in favor of doing so. On the other hand, if the transaction is to be gradual and long drawn out, as I feel it will be, this approach would appear to contain some aspects of discrimination, while at the same time making the transition more difficult. At this writing, I am inclined to think we should not go too far on this aspect.

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Exhibit 19

MARYLAND CENTREX TARIFF

ITEMS OF SIGNIFICANCE

1. Two schedules - one for business message service (metropolitan) and one for business flat service (county)

   Rates - A sliding scale for main stations.
   No message unit allowance.

SCHEDULES

	Main Stations						
	First 50	Next 250	Next 600	Over 900	Bridged Stations	Fully Restr.	C.O. Increment
Message	$8.00	$7.00	$5.75	$4.00	$2.75	$3.25	$.50
Flat	9.75	9.25	8.00	5.00	3.00	3.25	.35

Attendant Positions - New Centrex switchboard or console - $125.00
Customer may retain existing boards.

2. No on premises or same wire center mileage charges. (Costs folded into station rate)

3. Rate structure and regulations same as recommended by A.T.& T. Company.

4. Continuing minimum revenue guarantee for 200 stations at one location and additional revenue guarantees for growth.

5. The station rates in addition to special Centrex features of in and out dialing and station identification cover conventional P.B.X. tariff equipment such as stations, dial switches, power, trunks, most extension mileage, all rural zone differentials, satellite switching equipment and associated tie lines.

6. Centrex switching equipment may be located on Telephone Company premises but only at Company option and with main station increment to recognize value of floor space and commercial power.

7. Termination charges based on 3 years rather than 5 years as for conventional P.B.X. dial service, but are on a revenue guarantee basis and are amply protective.

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5/21/62

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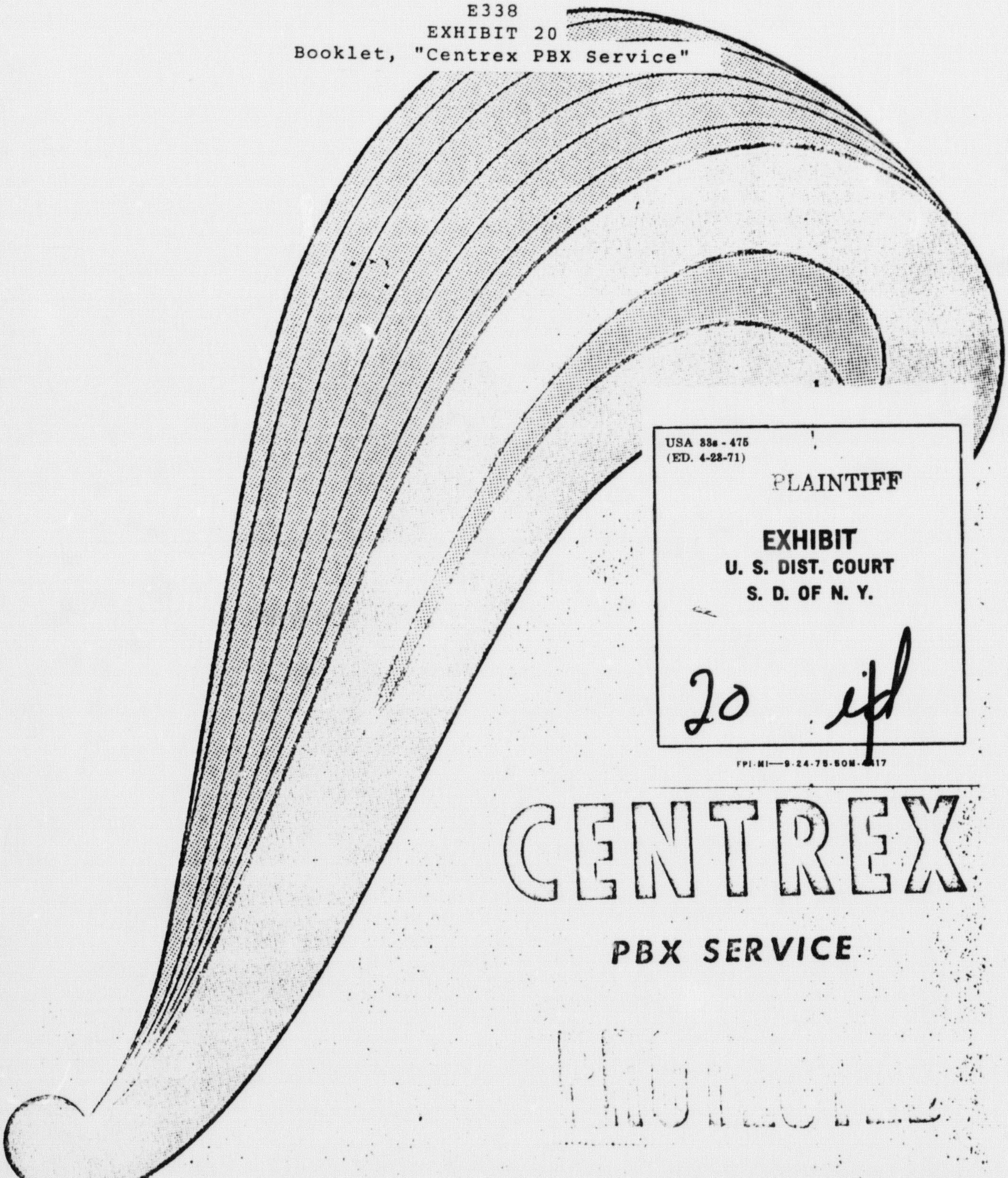
EXHIBIT 20
Booklet, "Centrex PBX Service"



USA 33s - 475
(ED. 4-23-71)

PLAINTIFF

EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

20 id

FPI-MI—9-24-75-50M-4417

CENTREX

PBX SERVICE

THE MOUNTAIN STATES TEL. & TEL. COMPANY

GENERAL COMMERCIAL
ENGINEERING DEPARTMENT

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GLOSSARY I

General Commercial Department
Engineering Section - Rate Unit
July 1961

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Exhibit 20

FORWARD AND PURPOSE

The following is a resume of the Centrex concept. The purpose of this Memorandum is to crystalize thinking on this subject, to bring together diverse viewpoints, to admit there is no black and white solution to the problem, to explain how the conclusions were drawn.

The views of the American Company and our own must be dovetailed together and a solution found which is acceptable to all concerned.

This then proposes rates and recommends a service offering which if adopted would standardize our offering, would furnish the needed guide lines and information which would allow tariff filings, would open up a new source of revenue, would offer the public a new service concept.

It has been most difficult to get this offering off of dead center. The reasons are not from conflicts between departments, committees, or individuals, but has been in obtaining a precise service objective, in gathering dependable costs and statistics from which to lay a foundation, in attempting to see into the future with all of its ramifications to know what our customers would prefer.

The recommendations herein meet the preponderance of these obejctives.

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BACKGROUND

December 28, 1951 -- General Traffic recommends in-dialing for telephone company in Denver.

1953 -- Telephone Company service installed in Denver using AComa 299.

October 25, 1954 -- The Arizona Public Service Company, Phoenix, asked us to provide 10 in-dialing trunks.

December 10, 1954 -- A. T. & T. undecided as to whether we should embrace the in-dialing concept for our customers.

February 21, 1955 -- A. T. & T. establishes In-Dialing Committee.

February 24, 1955 -- A. T. & T. Committee meets in Denver. Requests for in-dialing received by following Denver firms: The Gates Rubber Company, United Air Lines, Public Service Company, Continental Air Lines, City and County of Denver, United States Federal Center.

March 18, 1955 -- J. J. Hanselman opens door and suggests companies set up committees to offer in-dialing and coordinate with A. T. & T. Committee.

April 7, 1955 -- General Office In-Dialing Committee formed.

June 7, 1955 -- In-Dialing cost study requested from Inventory and Cost Engineers.

September 2, 1955 -- El Paso Natural Gas Company requests in-dialing service.

Exhibit 20

February 17, 1956 -- A. T. & T. decide in-dialing must include toll as well as local. Each extension must have a 2 - 5 number.

May 25, 1956 -- Basic concept of in-dialing forwarded to State Managers and Engineering Department asked to proceed with Air Force Academy plans.

August 8, 1956 -- A. T. & T. eliminates separate toll switching trains and coordinates with U.S.I.T.A. so they will follow suit.

September 4, 1956 -- A. T. & T. places inward dialing to 195 Broadway.

November 1, 1956 -- F.C.C. Tariff No. 132 filed with F.C.C. to authorize in-dial toll.

February 4, 1957 -- "BELL SYSTEMS NOTES ON MECHANIZATION OF PBX SERVICE" furnished and was first comprehensive general information.

September 9, 1957 -- Department of Defense is very interested in in-dialing and asks for quotations -- both company furnished and for certified bases.

October 2, 1957 -- Department of the Army authorizes use of in-dialing.

November 10, 1957 -- Pacific Telephone files first mechanized tariff.

December 4, 1957 -- San Francisco Mechanized Service Meeting between A. T. & T., Military, and Associated Companies.

December 30, 1957 -- Rates quoted to Air Force Academy.

July 30, 1958 -- Secretary of Air Force publishes handbook (TO. 31W2-1-34) on inward dialing to Air Force, Base Telephone Systems.

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Exhibit 20

August 31, 1959 -- Rate Memorandum No. 163 approved for mechanized PBX Service in our company.

January 1960 -- "Centrex" proposed as new name for in-dialing or mechanized PBX service.

September 20, 1960 -- Use of No. 5 Crossbar for Centrex proposed by A. T. & T.

December 15, 1960 -- Special Centrex for Airports suggested by A. T. & T.

April 10, 1961 -- A. T. & T. furnishes preliminary thinking on Centrex offering.

April 28, 1961 -- A. T. & T. booklet "Rate Development Considerations" forwarded.

July 14, 1961 -- M. S. T. Co. proposed new offering.

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Exhibit 20

MECHANIZED PBX SERVICE

PRESENT RATES AND POLICY

Rate Memorandum No. 163
Dated 8-26-59

RATES

Item	Monthly Rate
Mechanized PBX Service	
First 1000 Stations	$6.50 per station
Additional Stations (Over first 1000)	$5.75 per station

Minimum rate - $3000 per month*

*Basic termination charge based upon five years at one-half the monthly guaranteed revenue. Reduces 1/60 for each month the recurring charge is paid.

PACKAGE

Basic station rates include attendant's positions, trunks, intercept machine, switching equipment, power supply and call transfer feature.

MILEAGE

Rate Memorandum No. 163 does not cover extension station mileage charges; however, the regular tariff charges would apply for extension stations located outside of the main building.

AUXILIARY PBX

The mechanized PBX rates contemplate the usual PBX-type service arrangements and excludes extraneous type PBX services such as Auxiliary PBX, satellite switchboards or other similar arrangements.

BASE RATE

A "special assembly" charge to cover trunk mileage should be developed and recommended if a PBX is provided outside of the Base Rate Area.

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Exhibit 20

A. T. & T. CO. RECOMMENDATIONS

The O & E Department of the A. T. & T. Co. recommends a fully mechanized PBX type service offering which provides direct in and out dialing in addition to the conventional features provided by regular PBX service. This service arrangement is to be called Centrex service. It is contemplated that two basic service offerings will be provided, i.e., Centrex CU and Centrex CO. The CU classification is used when all or a portion of the PBX switching equipment is located on the customer's premises and CO is used when all of the PBX switching equipment is located on owned or leased company premises.

It has been suggested that a package station rate be developed which includes dial switching equipment, power plant, trunks, certain mileage charges and other miscellaneous features. The attendant's positions, however, would be charged for separately, at filed tariff rates. A slightly higher station rate should apply for Centrex CO than Centrex CU. The package rate concept provides separate rates for PBX main stations, extension stations and fully restricted stations. The basic rate levels include C.P. mileage and N.C.P. mileage is covered in the basic rates when the highest rate step is reapplied at each different non-continuous location.

The O & E Department realizes that their rate schedules as shown below cannot necessarily be applied to each company. They do, however, desire

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uniformity in the basic service offering, i.e., CO and CU Centrex offerings, package rate concept, tapered rate levels, attendant's positions billed for separately and separate appropriate rates for main, extension and fully restricted stations.

		CUstomer Premises				COmpany Premises
	Telephones in Local Service Area	First 50	Next 250	Next 600	Over 900	Added Charge
Schedule I	0-67,000	9.50	9.00	7.00	4.50	$0.25
Schedule II	67,000 - 374,999	10.75	10.25	7.75	5.00	0.35

Extension Stations -- $3.00

Fully Restricted Stations -- $3.50

NOTE:
- The tapered rate level is reapplied, starting at the highest level, at each non-continuous station location.
- The minimum charge per customer is equal to 300 main stations at one location.

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PROBLEMS

RESTRICTED STATIONS --

There are several means of restricting telephone usage on a dial PBX system:

1. *Restricted to out calls by restricting the ninth level.
2. Restrict both ninth level and "operator."
3. #Restrict from all in and out calls so only intercommunicating calls are possible.

*Now offered as regular PBX service at no reduced rate or additional charges.

#The American Company's proposal.

Prior to this proposed service we have not offered a fully restricted service in connection with in-dialing. There are several points as to why we should and should not offer complete restriction.

PROS

1. The American Company's task force has suggested restricted service and desires national uniformity of the Centrex offering.
2. The restriction, if needed by a customer, would fill a requirement.
3. The military has, we know, certain telephones which they traditionally desire to remove from off base calling.
4. A restricted station would be priced lower as no trunks would be required to serve them.

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5. The lower priced restricted stations would tend to compete with PAX and other customer owned intercommunicating systems.

6. We are presently offering partially restricted service on our dial PBX's and should continue with this service.

CONS

1. There is presently a wide justified variation between PBX offerings between associated companies. It is unrealistic to think that rates and rate forms could be the same all over the United States. Some other associated companies will not offer restricted service.

2. There is no customer demand. A demand could be created but would work to our disadvantage revenue wise.

3. The military could probably be satisfied if a special restriction was authorized, but without reducing rates.

4. Restricted stations on a Centrex CO basis would require a cable pair into the central office. In this case it might cost more to provide a restricted station than a non-restricted station due to the special strapping, special attention, etc.

5. The competition for intercommunicating systems is more mental than real. Only one case can be documented and that case disconnected their own system and left the Mountain States area. If keen competition becomes worrisome at a later date, the problem could be faced at that time. In the meantime, we would not be lowering our rates due to an assumed threat of competition.

6. Restricted service could be furnished as a service arrangement rather than a specially rated item.

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Exhibit 20

7. Centrex CO and CU is the best PBX service we offer and should not be purposely degraded. The customer should not be allowed to change the rate level by changing the frame work within the offering, i.e., by purchasing fewer main stations and more restricted stations.

8. If restricted stations are offered at a lower price, present non-restricted stations will have to be raised to a higher level. The higher level per main station will make the main station offering less attractive rate wise.

9. A restricted station would be used by our customer to control in and out calling by his employee. We should attempt to furnish service with in and out calling capabilities and let the customer control his personnel in some other way than us providing a lower rated telephone.

CONCLUSION

Restricted stations may have a place in the scheme of things at some later date. More revenue can be derived if they are not offered, as well as better service to the customer. Competition is not a major factor at this time. Therefore, this particular item should be reviewed during 1962 or 1963 or if the competitive situation changes.

EXTENSION STATIONS --

Standard Dial PBX service offers a bridged station, i.e., an extension off of a PBX branch. The rate for the station is lower than a main station, as no additional numbers, stations, or dial terminals are required.

When mechanized service was introduced, a lower rate was not authorized for a bridged station, the reasons being:

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ibit 20

1. If there were no rate incentives for the customers to "double up" the stations, the customer would provide a 2L-5N station in every case. If a secretary needed to answer the main station, key equipment could be provided. This would produce additional revenue, and furnish the best possible service.
2. Many bridged stations "water down" the quality of the service, cause additional busy reports and reduce line availability.

For some unexplained reason, present in-dialing customers have ordered many bridged stations, in spite of the rate being the same for main and bridged stations. It is evident that a greater need for bridged stations exists than was originally thought.

The two stations on the same line cannot each utilize different trunks simultaneously. The revenue requirement for a bridged station is less than a main station, as there is no trunk cost allocation to the station. If a bridged station is offered and the rate is lower, and this new rate is applied to an existing system with many bridged stations, the present revenue would be inadequate to support the whole system.

It is obvious if part of the revenue producing stations are lowered, and we do not wish to lower the customer's bill, the other (main stations) must be raised.

CONCLUSION

Because of the customer need, bridged (extension) stations should be made a part of the new Centrex offering, and at a lower than main station rate.

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MOUNTAIN STATES TELEPHONE COMPANY
RATE AND CHARGE RECOMMENDATIONS

Centrex service is similar to conventional type dial PBX service with added features including direct in-dialing to stations, station identification on outward toll calls, station transfer, intercept and night connections. There are two classifications of Centrex Service, Centrex - CU and Centrex - CO as explained in the O & E recommendation.

There is a lack of Mountain States supporting cost detail for the rates and charges proposed herein. The rates shown were arrived at by pricing out six existing and thirteen quoted mechanized PBX systems at rates provided in Rate Memorandum No. 163, "Mechanized PBX Service." Rate comparisons were made using different proposed levels of rates for CU service and the charges applicable using the rate memorandum level of rates. This price out of the nineteen PBX systems using the rate level recommended herein and the rates in the rate memorandum resulted in an increase of approximately 2 per cent in the customer billing when pricing out the packaged items. In the absence of Mountain States' cost studies the rates for CO service were arrived at by using our recommended rates for CU service and adding a 25¢ increment to the main station rate. This increment was included in the O & E illustrative material and reflects value of floor space and power provided by the Telephone Company. In cases where the customer's bill increases when using the proposed rate levels, a Form 2037 could be issued for authorizing the existing or quoted rates until the termination liability period has expired. However, effort should be exerted to

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establish the new rates as soon as possible. The recommended rate treatment is in line with the basic rate concept used by the O & E in their illustrative Centrex material.

Due to possible problems in furnishing Centrex CU and CO, such as outside plant facilities, central office facilities and customer's service location, the classification of Centrex service furnished is at the discretion of the Telephone Company.

The package rate developed includes dial switching equipment, power plant, trunks, intercept, call transfer feature, station billing, primary directory listing and continuous property mileage. Regular tariff rates will apply for attendant's positions, additional listings, supplemental equipment items, certain mileage and incremental charges and other features desired that are not included in the rate package.

The main station Centrex package rate includes a 15¢ increment for continuous property mileage. In those cases where installation carrying charges are being billed, it would not be feasible to assess the full package main station rate, including the mileage increment when ICC billing already takes into consideration all mileage on the property involved. It is, therefore, recommended that 15¢ (C.P. mileage increment) be deducted from the main station Centrex rate when the service is subscribed for and the stations are located on property of an ICC customer. Handling these cases in this manner will have no effect on the present ICC billing and only the main station rates for the Centrex service will be involved.

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The O & E illustrative rate treatment included two rate schedules that would be applicable to companies having many large concentrated population areas. In pricing out various rate proposals we found that in our Company, which is composed principally of comparatively small and few metropolitan areas, one schedule would suffice.

It is recommended that the following package rate treatment be applied for Centrex service:

CENTREX CU	Monthly Rate	Service Connection Charge
1st 50 Main Stations, each	$10.00	Regular tariff service connection charge for PBX Stations
Next 250 Main Stations, each	9.50	
Over 300 Main Stations, each	6.00	
Extension station, each	4.00	
Switchboard or Console	Regular tariff rates and charges	

CENTREX CO	Monthly Rate	Service Connection Charge
1st 50 Main Stations, each	$10.25	Regular tariff service connection charge for PBX Stations
Next 250 Main Stations, each	9.75	
Over 300 Main Stations, each	6.25	
Extension station, each	4.00	
Switchboard or Console	Regular tariff rates and charges	

- Termination Liability

  Based upon 5 years at one-half the monthly guaranteed revenue and reduces 1/60th for each month the monthly rate is paid.

- The minimum monthly charge is equal to 300 main stations for the same customer at any one continuous property location.

  Station mileage or incremental charges are assessed to stations in service, not to a minimum of 300.

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- Changes from conventional to Centrex Service

  CU Service - Assess termination liability for only that equipment in place that is not used for Centrex Service.

  CO Service - Assess BTC for unexpired period.

- Extension stations off premises from their associated main station are assessed the same rates that would be applicable for a main Centrex station.

- The basic level of main station rates are applied to stations located within the Base Rate Area of the same central office district. The level of monthly rates assessed start at the first or highest rate level for each different non-continuous property location. The following charge treatment will apply to those cases where the primary location, off premises stations or secondary switching locations are not covered by the above.

Primary Locations Within --

Suburban Rate Area and Locality Rate Area

CU Service - Assess appropriate station rate level plus Suburban Rate Area or Locality Rate Area trunk increment to the "free" trunks.

CO Service - Assess appropriate station rate level plus the 1FB Suburban Rate Area or Locality Rate Area increment to each station.

Exchange Area

CU Service - Assess appropriate station rate level plus exchange mileage to each "free" trunk.

CO Service - Assess appropriate station rate plus exchange mileage to each station.

Off Premises Main Stations

Located within the same central office district Suburban Rate Area or Locality Rate Area boundary as the primary location:

- Appropriate station rate level only applies.

Located outside of the same Base Rate Area, Suburban Rate Area or Locality Rate Area boundary or continuous property exchange area primary service location, within the same or different central office district:

- Assess the primary location station rate level, plus extension line mileage.

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Exhibit 20

Secondary Switching Location

Unattended Dial Equipment if --

Located within the same central office district Base Rate Area, Suburban Rate Area or Locality Rate Area Boundary, as the primary location:

- Appropriate station rate level only applies.

Located outside of the same Base Rate Area, Suburban Rate Area or Locality Rate Area Boundary, or continuous property location in the exchange area, as the primary service location and within the same or different central office district:

- Assess the primary location station rate level plus tie line rates.

Manual or Dial - Mixed System --

In cases where a csutomer has Centrex Service at a primary location and regular PBX Service at a secondary location:

- Assess regular PBX rates and charges for the service at the secondary switching location plus tie line rates equal to flat trunk rates. Mileage charges will not be applicable if the secondary location is located within the same Base Rate Area and central office district as the primary location. Regular trunk mileage charges and/or Suburban Rate Area or Locality Rate Area increments will be applicable if the secondary system is outside the Base Rate Area and central office district as the primary location.

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Exhibit 20

Reference material used in preparing the rate recommendations:

- M. S. T. & T. Co. Rate Memorandum #163 dated August 26, 1959
- A. T. & T. Co. salmon colored book "Centrex Service, Rate Development Considerations," dated April 1961
- A. T. & T. Co. grey book "Centrex Rate Meeting," dated May 1961
- Special Studies by the General Office Rate Group
- M. S. T. & T. Co. General Exchange Tariff

Date 7-14-61

Date ________

Recommended by C.V. Bergey

Approved by ______________________
General Rate & Tariff Engineer

RDM FILED

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Exhibit 20

TEST AND ANALYSIS OF RECOMMENDED RATES

		Rate Memo #163 1st 1000 Stations @ $6.50 Over 1000 Stations @ 5.75 (Minimum Billing $3000.00)	Recommended Rates * 1st 50 @ $10.00 Next 250 @ 9.50 Over 300 @ 6.00 Extensions @ 4.00 (Minimum Billing equal to 300 Main Stations or $2875.00)
Arizona			
** State Capitol		$ 6069.15	$ 6263.00
** Motorola		3123.90	3435.00
** Public Service		5745.00	5618.50
Republic & Gazette		3039.50	3233.00
City of Tucson		3329.70	2776.00
GSA		3734.50	3018.50
General Electric	(1)	7031.85	6095.25
Salt River Power		3800.95	3398.75
** Valley National Bank		6043.00	6233.50
** First National Bank		6118.25	6293.50
Airesearch		10220.45	10524.00
Colorado			
Gates Rubber Co.		6525.00	6700.00
New Mexico			
State Capitol			
Texas			
El Paso Gas Co.		9564.50	9547.00
El Paso Gas Products		3392.40	3443.50
Utah			
** State Capitol	(2)	4633.00	5187.00
Geneva Steel	(3)	7578.85	6183.25
		$89950.00	$87896.80

*Station mileage charges included in the package rates will eliminate 98 per cent of those cases, in the accounts studied, presently being charged for station mileage as a separate item.

**Present Centrex CU Service.

(1) Includes $1069.25 for non-continuous property mileage that could be eliminated if the 91 stations involved were served from an unattended dial auxiliary location. ($7031.85 less station mileage of $1069.25 = $5962.60 plus tie line mileage for 10 tie lines -- $112.50 equals total revenue of $6075.10 plus applicable charges for unattended dial system.

(2) Includes attended 555 Auxiliary PBX with 66 stations @ $1.90 each.

(3) The large difference in present and proposed rates is due to packaging of "continuous property" mileage and the high C.P. station development of this particular customer.

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Exhibit 20

POSSIBLE CANDIDATES FOR CENTREX SERVICE AND MECHANIZED SERVICES NOW WORKING

Within the Mountain States territory there are 63 immediate prospects for Centrex Service. The prospects, nature of business and main station size make them candidates for this service. Ten mechanized (Centrex) systems are now working at rates provided for in Rate Memorandum #163. The following is a list of immediate "Centrex" prospects and present mechanized service customers.

Arizona

Airesearch
Williams AFB
City of Phoenix
Republic & Gazette
GSA
* Arizona Public Service
Hughes Aircraft
Tucson Newspapers, Inc.
* State Capitol
* Motorola
* Valley National Bank
* First National Bank
City of Tucson
General Electric
Salt River Power
Luke AFB
* Davis-Monthan AFB

Colorado

Dow Chemical
Bureau of Standards
Ent AFB
Fort Carson
Montgomery Ward
City & County of Denver
Department of Welfare
Martin
Martin
Martin
Martin
New Customs House
Air Force Finance Center

Colorado (Cont'd.)

Denver Federal Center
Public Service of Colorado
Denver & Rio Grande R.R.
Continental Oil
Denver Post
State Capitol
Air National Guard
United Airlines
Denver U.S. National Bank
First National Bank
Stearn's Roger
May - D & F
Denver Dry Goods
Colorado Fuel & Iron
* A. F. Academy
Gates Rubber Co.

Idaho

State of Idaho
* Mountain Home AFB

Montana

Montana State Capitol
Glasgow AFB
* Malmstrom AFB

New Mexico

Holloman AFB
ACF Industries
Kirtland AFB

Exhibit 20

New Mexico (Cont'd.)

- General Services Adm.
- Cannon AFB
- Los Alamos Townsite
- Los Alamos TA-3
- Walker AFB
- State Capitol

Texas

- El Paso Natural Gas
- El Paso Gas Products

Utah

- Marquardt
- Columbia Geneva Steel
- Sperry Utah Engineering
- LDS Church
- ZCMI
- Hercules Powder
- First Security Bank
- Federal Bldg.
- Utah Power & Light
- Kennecott Copper
- * State Capitol

* Present Mechanized System

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E360
EXHIBIT 25
C. F. GOODE November 9, 1961 document prepared by J.N. King

COMPANY CONFIDENTIAL

November 9, 1961

NOTES ON MEETING OF PACIFIC COMPANY REPRESENTATIVES AND CPUC STAFF MEMBERS ON NOVEMBER 1, 1961

Present

Pacific Company	CPUC Staff
J. A. Aschoff	J. G. Shields
W. B. Tribble	V. Cassman
J. N. King	

~~PLAINTIFF~~
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
Def
25

Purpose of Meeting

The staff requested this meeting to discuss generally our tariff proposal on CENTREX (Proposal No. 61245). The staff had informed us prior to the meeting that they were particulary interested in the ways in which some of the supporting figures on the GE-100s accompanying the proposal were developed.

Background

Mr. Shields mentioned that this proposal had been assigned to him as a result of an overload of work in the San Francisco office. He thought it was probable that he would write a memorandum incorporating the results of this meeting with his comments on CENTREX and that further investigation of the proposal would be carried out by members of the staff in the San Francisco office.

Company Comments

Concerning the difference between CENTREX and services now provided for the Bank of America, City of Oakland, and Kaiser Industries in San Francisco-East Bay and the State Office Building in Los Angeles, the Company explained that the #5 X-Bar installation under CENTREX is the same to all intents and purposes as that provided for the State Building in Los Angeles. The 701 type CENTREX is the same to all intents and purposes as the service provided for a few customers in the San Francisco-East Bay exchanges under Schedule Cal. P.U.C. No. 112-T. However, the rates under 112-T are based upon costs representative of a limited area only while costs for the entire state were used in developing CENTREX rates. Use of statewide costs produces somewhat higher rates than those of 112-T. Service for the State Building at Los Angeles is provided under contract at a rate that is somewhat less than the proposed CENTREX rate because of the statewide cost approach used for CENTREX.

In answer to a question regarding what determines whether #5 X-Bar or 701 type CENTREX should be provided, the Company mentioned the following considerations: the availability of equipment and facilities, the fact that #5 X-Bar CENTREX requires a pair from the subscriber's location to the central office for each line while 701 type CENTREX does not, availability of equipment space for the 701 type CENTREX at the subscriber's premises, availability of equipment space at the central office for #5 X-Bar type CENTREX equipment,

Exhibit 25

that a considerable amount of 701 equipment is available, possibility of re-use in event of disconnection of central office lines and equipment which might have to be installed for a #5 X-Bar system, the fact that 701 type CENTREX functions with any type of central office equipment, and the amount, type, and age of existing equipment at the subscriber's location.

Regarding the possibility of using line concentrating equipment to reduce the requirement for pairs in #5 X-Bar installations the Company answered that such equipment was not now available but that Bell Labs was looking into the possibility and that it probably would be available sometime in the future.

In response to a question regarding the anticipated demand for CENTREX, the Company said there are approximately 200 subscribers in California who are considered to be likely candidates for CENTREX in the next four or five years.

Regarding whether #5 X-Bar CENTREX would offer adequate control to the armed services from a security standpoint, we said we had heard no complaints on this and that we understood that the Pentagon had this service.

The Company verified that there is no difference between CENTREX and Mechanized Switching as far as identification of outgoing calls is concerned. The Company also explained that the basic reason why the two methods used in calculating cost sheets produce slightly different results is the depreciation factor. The Company uses 82% depreciation based upon all Company plant statewide.

The staff asked about the availability of optional detailed billing for CENTREX customers. The Company said this is being considered now but it is not known if there is any demand for such service. However, it is mechanically possible to furnish it under CENTREX. The Company pointed out that present PBX customers are not getting as complete billing information as CENTREX subscribers will receive. The question is whether optional detailed billing can be provided under CENTREX at the same rates that optional detailed billing is now offered. Optional detailed billing is not presently provided for PBX users on a station basis, just on a pilot number basis. In further discussion, the Company said that we do not think we will have any demand for optional detailed billing with CENTREX and that CENTREX is not excluded in the tariff offering of optional detailed billing.

The staff noted the provision that the Company will provide trunks as required and questioned what criteria would be used if the number of trunks became an issue with a subscriber. We explained that we would make a traffic study and pointed out that our desire is to move traffic since that is what produces revenue. Frequently the problem now is to get customers to subscribe for an adquate number of trunks. For example, we doubled the number of trunks provided when Fort Ord went to CENTREX, and we feel this is largely responsible for the better service which Fort Ord now says it is experiencing.

In answer to a staff comment that business users should shoulder more of the load, the Company pointed out that CENTREX rates

Exhibit 25

are based on an 8% return, which is higher than the residence rate of return. The Company explained further that CENTREX will be competitive with PBX service and therefore CENTREX rates must be attractive when related to PBX. While the Company believes that CENTREX may eventually replace PBX, we recognize that the customer will not take CENTREX if he has to reach too far for it, financially speaking. CENTREX has many side effect advantages to the subscriber such as shorter holding times, reduced force requirements and less manual handling of calls but direct cost comparisons with PBX are still a major consideration.

The Company said that the offering initially is limited to customers with 300 primary stations or more because the inclusion of small users (80% of our present PBX market is for customers with less than 300) would force CENTREX rates higher. However, we are anxious to widen this offering to include smaller users after the service is established and as it becomes economically feasible.

Answering questions regarding customer owned equipment, the Company explained that we furnish trunks only. Charges are based on the trunk rate plus an incremental charge depending upon the specific installation. This is not done on a wholesale basis but only for certain customers such as the Federal Government and railroads.

Commenting on a hypothetical example posed by the staff involving a CENTREX customer with less than 300 stations in a suburban area, the Company explained that the customer would have to pay the 300 station rate but that the suburban mileage charge (15¢ per station per quarter mile) would be based upon the actual number of stations.

The Company answered a question regarding the location of CENTREX equipment by saying that the proposed tariff does not at this time visualize a set-up where the equipment for a 701 type CENTREX installation would be placed in the central office rather than at the customer's location.

A question as to the difference in monthly rate between flat rate and message rate extension stations was answered as follows: the difference is based upon current rate treatment of flat rate and message rate trunks - the proposed rate is designed to maintain the present differential - also the load for the trunking is carried by the primary station rate.

Additional questions were answered as follows:

- Where the customer has the diverting feature, an attempt to dial an unauthorized call would result in that call being funneled to the PBX operator.
- Attendants' positions are charged separately with the same rate being applied regardless of the type of CENTREX equipment.
- The five-year period contemplated by the basic termination charge is pretty generally standard.
- If an electric utility experienced a flood of calls in an emergency, the Company believes that the equipment would not

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Exhibit 25

"choke up" to any greater extent in a CENTREX installation and possibly to a somewhat lesser extent if CENTREX resulted in relatively more trunks per installation as expected.

- **The Company** feels that the 9 to 1 ratio of 701 type to #5 X-Bar type CENTREX will hold fairly steady for the foreseeable future.
- To a suggestion that CENTREX only be offered on a message rate basis, the Company said there seemed to be two alternatives under such an approach. If CENTREX were limited to exchanges where message rate service is now offered, customers in other exchanges would be denied the opportunity of subscribing for CENTREX. It is possible this might be considered to have some elements of discrimination. On the other hand, if the approach was to expand the offering of message rate service in order to avoid the limitation mentioned above, equipment additions would be required in offices that are not now equipped to provide message rate service. Although the cost of such a program is not known, certainly there would be costs involved and, to this extent, rates would have to be raised to reflect the added costs.
- Measurement of mileage under RATES (9) (C) is carried out in the same manner as for PBX station mileages in other tariffs.
- The last in - first out provision of Condition 10, original Sheet 10, relating to the computation of basic termination charge, is standard procedure that is pretty generally applied throughout our tariffs.
- CENTREX customer may have an additional listing in the directory for a CENTREX station at the regular rate (example - Bank of America in San Francisco directory).
- Substitution of "location" for "premises" is to avoid confusion because of the different handling of mileage charges on continuous property on CENTREX compared with PBX.
- The average trunk requirement shown on the first page of the Basic Study Data was used in developing the "package" rate. In specific CENTREX installations, the number of trunks per 100 stations could be more or less, depending upon the specific requirements.
- Referring to sheet 10 of the Basic Study Data, the figures on space cost and power cost were developed by our building engineers.

The following information was given in answer to questions pertaining to the GE-100s:

- The 5.9% for Supply and Sales Tax (item F on the back of Form GE-100) is a factor which is figured each year on the basis of actual experience.

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Exhibit 25

X

- The total installation cost (item K on the back of GE-100 for 701 type, 300 main stations, flat rate area) is figured by our equipment engineering people.
- The cost of restoration (item M on the back of GE-100) is an engineering estimate.
- The estimated location life is provided by our equipment engineering people.

Staff Comments

Since most of the meeting consisted of Company representatives answering questions, the greater part of the discussions which developed are covered under Company Comments. However, some of the main points brought out by the staff are covered below.

One of the main concerns expressed by the staff over this proposal is the absence of any criteria for determining the number of trunks required. They seemed to feel that some problems might arise when the customer felt that more trunks were needed than the Company had determined to be necessary.

The staff indicated that they might be somewhat opposed in principle to "tapered" rates. However, they said that they did not care to discuss it at this time.

Another point on which the staff indicated possible disagreement was the fact that an extension station on a primary station (restricted) carries the same rate as an extension on a primary station.

Next Meeting

No date was set for a future meeting on this proposal. Mr. Shields indicated that he might want to inspect the system provided for the State Office Building in Los Angeles. He said he would contact our General Representative in Los Angeles to make such arrangements if he decided to do so.

Also, the staff said that the next step might be to have one of their people talk to our traffic and equipment men regarding their part in the development of GE-100s. However, they did not want to make any definite arrangements at this time.

JNK:jwb

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E365
EXHIBIT 33
January 23, 1962 document received by Pacific
Telephone from California Public
Utilities Commission Staff

Establishment of a New Tariff Schedule - Centrex Service and Revision of Schedules Cal.P.U.C. Nos. 17-T, 28-T, 36-T and 112-T (61245)

San Francisco, January 23, 1962

C. F. GOODE:

This refers to our tariff proposal on the above matter.

Attached is a copy of suggestions received from the Commission's staff on this proposal, together with their suggested rate treatment for Centrex Service.

We would appreciate receiving your opinion on how we should reply to the Commission staff's comments.

K.R.C.
K. R. CRITTENDEN

KRC:jwb

Attachment

cc: J. A. Aschoff ✓

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(ED. 4-22-71)
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EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.

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FPI-MI—9-24-70-50M-4417

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E366
Exhibit 33

473-61

The Pacific Telephone and Telegraph Co.
General Representative

Commission Staff Suggestions on CENTREX Rate Proposal - TPT&T Co. No. 61245

1. Full message rate service is suggested for the following reasons:

   a. Monthly charges will be in accord with amount of subscriber usage.

   b. Eliminates multiplicity of rate treatments for same service.

   c. Would give incentive to provide an adequate number of trunks.

   d. Of 88 potential flat rate subscribers, only 19 are located in exchanges where message rate service is not available for business subscribers other than FEX.

   e. Most flat rate exchanges are in lower earning areas than message rate. Message rate CENTREX service would help to build up revenues in these areas.

   f. The provision of trunks at no additional charge make this service different from usual flat rate PBX services.

   g. A subscriber having requirement for mainly intra-PBX calling would not be penalized by having a large trunk charge loaded into his rate.

   h. A CENTREX subscriber in a small exchange will have a usage pattern far different from the average business subscribers in similar exchanges. Most small exchanges do not have subscribers with 300 stations.

2. An installation charge of 50% of the nonrecoverables is suggested for the following reasons:

   a. Will provide the company with additional revenue at time annual charge requirements on invested capital are highest, i.e., on new plant.

   b. Will provide lower monthly rate.

   c. Will protect company investment beyond the five-year termination charge period where nonrecoverables are depreciated over a 15-year period.

   d. Will have less impact on customer at time of disconnection when he may be least able to pay termination charges.

   e. Installation charge treatment is comparable to treatment given other customers of highly specialized services.

3. Provision should be made in the tie line rate for connection to trunks on a message rate basis.

4. The hotel message rate should be applied to CENTREX services located in hotels.

5. Condition providing for use of utility building space should be clarified to indicate option of subscriber to use his own building space.

620119

E367
Exhibit 33

ATTACHMENT

CENTREX Service
Staff Suggested Rate Treatment

TERRITORY

Within the exchange areas of all exchanges.

CHARGES AND RATES

	Installation Charge*	Rate per Month
Primary Stations		
First 300 or less stations	$10,500.00	$1,800.00
Next 700 stations - each station	35.00	4.50
Over 1,000 stations - each station	35.00	4.00
Each Restricted Station	20.00	3.25
Extension Stations		
Each station	10.00	2.25
Exchange Message Rate		
Each exchange message in connection with above service		
Hotels	-	.05
Other Than Hotels	-	.04½

* Service connection charges are additive to installation charges when service is inaugurated.

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EXHIBIT 37A
February 1, 1965 memorandum from F.C. Smith
with attachment "Notes on Rate Principles
and Illustrative Rate Treatment"

Centrex I with 100-Station Minimum

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK, N. Y. 10007

AREA CODE 212 393-9800

February 1, 1965

USA 3-8-476
(ED. 4-23-71)
PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
37A
FPI-MI—9-24-78-50M-4417

On April 28, 1961 Mr. Kertz wrote to the General Commercial Managers outlining a basic approach the Companies might follow in developing rates for Centrex Service. At that time analysis of the costs of facilities indicated that in most situations, systems with fewer than 300 main stations would require rate levels too high to be attractive to customers. Accordingly, most Companies established minimum station requirements at about that level.

Subsequent developments in system design, including the recent introduction of ESS No. 101 and the 757A PBX, suggest that it is now feasible to offer Centrex I to customers whose main station requirements fall within the 100 to 300-station range. While the per station revenue requirements for these smaller systems are somewhat higher than for larger installations, the rate levels indicated should nevertheless be attractive to most customers.

The attached notes summarize the basic rate principles which the Companies may wish to follow in developing rates for their expanded Centrex I offerings. Additional material discussing in detail the application of these principles to the development of specific rate schedules has also been prepared and is being sent directly to your Rate people. Mr. Froggatt is also sending information to the Chief Engineers detailing a suggested method of developing individual cost studies for each Company.

Because of different conditions in each state, it does not seem practicable to suggest a single rate for Systemwide application. For illustrative purposes, however, typical rate schedules have been developed which meet the following basic objectives considered desirable for the offering:

- Total charges meet the revenue requirements of systems below the present minimum.

- Charges for systems above the present minimum are unchanged.

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Exhibit 37A

- A single set of schedules applies to systems of all sizes above 100 stations.

- The schedules can be modified in the future to accommodate lower station minimums.

At the request of Messrs. Collins, Froggatt, Mapes and Dyer copies of this letter are being sent to the General Traffic Managers, Chief Engineers, and Public Relations Vice Presidents. Mr. Landry is planning to send copies to the General Marketing Managers.

Don Fordyce (Area Code 212 393-4541) is familiar with this subject and is available to discuss any aspects of it with your people.

Yours very truly,

for Assistant Vice President

Attachment
Notes

To all General Commercial Managers,
General Traffic Managers, Chief
Engineers and Public Relations
Vice Presidents

Explanatory Statement
(To addressed names only)

E370
Exhibit 37A
Centrex I Service

Below 300 Stations with a 100 Station Minimum

Notes on Rate Principles

and Illustrative Rate Treatment

(Accompanying letter dated February 1, 1965)

The following summarizes basic rate principles recommended for System use in developing rates for Centrex I below 300 main stations with a minimum of 100 main stations. Also included is an example of a rate schedule which embodies this basic rate approach. This schedule should be looked upon as illustrative only, however, since each Company's rates will necessarily reflect its own cost and other conditions.

General Rate Approach

The rate approach followed in the development of charges for Centrex I in the 100 to 300 station range is generally the same as that outlined in the Centrex rate material sent to the Companies in April, 1961. As in the case of the larger size systems now offered, the basic emphasis is upon the service to be provided, rather than upon the specific facilities or hardware which might be used to provide that service.

At the time of the original Centrex offerings, two principal systems were available to the Companies for providing the service, No. 5 Crossbar and 701B step-by-step. Generally, market considerations together with the recognition of the inherent economies in large installations, resulted in tariff offerings by most Companies which provided for a minimum of about 300 stations.

The introduction of additional serving systems such as 757A Crossbar, No. 101 ESS, and No. 1 ESS, now permits broadening our offering to include smaller customers.

The pricing philosophy followed by the Companies in their original Centrex offerings recognized the desirability of having lower unit prices apply to volume purchases. This was consistent with the declining per station revenue requirements of increasing size installations. An additional consideration, however, was the effect of multi-location arrangements where some of the economies of serving large customers are lost when all stations are not in one place. Accordingly, a tapered rate schedule was introduced which gave the customer a declining rate for added stations at his main location, but provided for a higher "start-over" rate at his smaller secondary locations.

Since most existing tapered schedules were designed to recover revenue requirements for systems at or above the 300 station minimum size only, they cannot generally be used as the basis of charging for small installations. Further, the use of 757A Crossbar and No. 101 ESS, in addition to 701B and No. 5 Crossbar, warrants a complete evaluation of revenue requirements of small systems. A review of the many assumptions prerequisite to the development of a composite rate is also essential.

Exhibit 37A

In planning the development of the following illustrative rate material, it seemed desirable to evolve a rate schedule which would be an extension of the present Centrex I offering rather than be a separate "small customer" Centrex I. Accordingly, the new illustrative schedules have been designed for application to all sizes of Centrex I systems above 100 stations and meet the following objectives.

- Total charges meet the revenue requirements of systems in the 100 to 300 station range.
- Charges to existing customers for systems above the present minimum are unchanged.
- The schedule can be modified in the future to accommodate lower station minimums.

One departure from the original Centrex recommendations, however, is the application of a separate tapered rate schedule at secondary locations rather than a start-over of the schedule used at the main or primary location. Discussed in more detail below, this change appears necessary to avoid increasing charges to existing multi-location customers.

Service and Features

The proposed basic service and features are the same as presently provided on a "package" basis for Centrex I above 300 stations, namely:

- Equivalent of basic dial PBX service (Series 100).

PLUS

- Direct in-dialing to unrestricted stations.
- Station identification on outward toll traffic.
- Split-talk forward on incoming calls.
- Transfer of incoming exchange and DDD network calls from one station to another by the attendant.
- Intercept - machine or attendant.

Generally, the same auxiliary services which are available with Centrex I above 300 stations are to be available with Centrex I below 300 stations. These may be provided on an optional basis at additional charges. Among these, are:

- TOUCH-TONE Service
- Tie Lines
- Switched Network Access Lines (CCSA)
- WATS Lines
- Foreign Exchange Lines
- Attendant Conference
- Code Restriction
- Connection to Customer's Paging System
- Dial Dictation Recording Trunks

E372
Exhibit 37A

Revenue Requirements

Revenue requirement data used in these studies have been developed by the A. T. and T. Engineering people and are based upon the most recent marketing, traffic, equipment and cost information available. All data, however, are on a System average basis and should be considered illustrative only.

A booklet containing an outline of the development of these cost studies has been prepared and will be distributed by Mr. A. M. Froggatt for use of the Chief Engineers.

In general, the revenue requirements per station for systems in the 100 to 300 station range are higher than those for larger systems. Typical costs within this range have been developed at 50 station intervals, utilizing No. 5 Crossbar, 701B and 757A equipment. Typical revenue requirements for No. 101 ESS have also been prepared, but have not been worked into the illustrative rates due to the relatively small number of stations to be served by 101 ESS within the next five years. Revenue requirements for ESS No. 1 type equipment are not known at this time. Here again, it is anticipated there will be a relatively small number of stations served by such equipment within the next five years.

Rate Treatment

While a recommended method for the determination of rates has been developed, it is recognized that a single set of rate schedules could not be applied Systemwide for a number of reasons. For example:

- Present levels and structure of Centrex I rates vary among the Companies.
- The market below 300 stations may vary from state to state.
- The mix of facilities used to provide Centrex I differs from state to state.
- Basic charges for exchange trunks are different.

The following rate schedules illustrate the application of the proposed method using average System revenue requirements for systems under 300 stations in size, and "existing" tariff charges for systems over 300 stations. The "existing" charges are those which would apply under the Centrex rate schedule illustrated in Mr. Kertz's letter of April 28, 1961.

Exhibit 37A

Illustrative Rate Treatment

A. At Primary Location - Unrestricted Main Stations:

		Monthly Charge Per Station				
		Centrex-CU				Centrex-CO
	Telephones In L.S.A.	*First 100	Next 100	Next 700	Over 900	Added Charge
Schedule I (Flat Rate)	Under 67,000	$12.25	$8.00	$7.00	$4.50	$0.25
Schedule II (Flat Rate)	67,000 to 375,000	13.50	9.75	7.75	5.00	0.35
Schedule III (Message Rate)	Large City Metro. Area	9.50	6.25	5.75	4.00	0.50

* Minimum charge at primary location is that for 100 unrestricted Main Stations.

B. At Secondary Locations - Unrestricted Main Stations:

		Monthly Charge Per Station				
		Centrex-CU				Centrex-CO
	Telephones In L.S.A.	#First 50	Next 250	Next 600	Over 900	Added Charge
Schedule I (Flat Rate)	Under 67,000	$ 9.50	$ 9.00	$ 7.00	$ 4.50	$0.25
Schedule II (Flat Rate)	67,000 to 375,000	10.75	10.25	7.75	5.00	0.35
Schedule III (Message Rate)	Large City Metro. Area	8.00	7.00	5.75	4.00	0.50

# No minimum station requirement at secondary locations.

E374
Exhibit 37A

Secondary Locations

Aside from the actual rate levels and station groupings, the principal change from the 1961 recommendations is in the pricing of stations at secondary locations. Because of the relatively high first-step rate necessary to meet the higher costs in small systems, the present pricing plan in most Companies of starting the station count over at secondary locations would lead to significant rate increases for existing large customers who have extensive satellite or off-premises station arrangements.

While application of the new schedule illustrated in (A) above produces the same total charge for system with over 300 stations at the primary location as would apply under the existing 300 station minimum schedule, it appears necessary to retain this present schedule for pricing stations at secondary locations. This has been shown in (B).

Because of the extreme variations in primary-secondary arrangements, revenue requirements studies of satellites and off-premises stations have not been made. The rate approach followed, however, would seem reasonable since it applies a higher charge for stations added at the secondary than if those same stations were added at the primary.

Attendants' Facilities

It is recommended that the same monthly charges apply for console and switchboard positions as are presently filed for Centrex systems with over 300 stations. In a number of Companies, this charge is $125.00 per position. Existing installation charges should also apply.

Service Connection Charges

It is proposed that presently established Service Connection Charges for Centrex I above 300 stations apply for systems down to 100 stations as well. Since these charges are not applied on a tapered basis today, continuance of the across-the-board level appears reasonable.

Illustrative Service Connection Charges shown in the 1961 Centrex rate material were as follows:

	*Each Centrex Station
Schedules I and II (Flat Rate)	$6.00
Schedule III (Message Rate)	$7.50

* Applies to each unrestricted or restricted main station and bridged station.

E375
Exhibit 37A

Bridged Stations

It is proposed that the same monthly charges for bridged stations apply as those now filed for the larger Centrex I systems. Since the current rates generally apply across-the-board regardless of total system size, it would not appear reasonable to apply a different rate in the 100 to 300 station range.

In the 1961 Centrex rate material, the following monthly charges were illustrated:

	Each Bridged Station
Schedules I and II (Flat Rate)	$3.00
Schedule III (Message Rate)	$2.75

Restricted Stations

Today, most Companies apply a consistant monthly charge for restricted stations, regardless of the size of the customer's system. This charge ranges from $3.00 to $5.00 throughout most Companies. It would appear reasonable to apply the same charge to restricted station in systems with 100 to 300 unrestricted stations. It is recommended, therefore, that the present charge for restricted stations be extended to all systems with 100 stations or more.

It should be emphasized that these rate levels contemplate a service restricted to intercommunication with other stations in the same Centrex system only. Where stations have access to trunks, WATS lines, FX lines, private lines, tie lines to other PBX's or Centrexes, Network Access Lines, or the attendant, unrestricted rates should apply.

Certified Military Bases

Since government-owned installations are generally larger than 300 stations, Certified-Base Centrex will not likely be required in the under-300 station size. Therefore, it did not appear necessary to develop illustrative material for the lower station ranges.

Contingent Termination Liability

Contingent termination liability provisions have been established for Centrex service in the tariffs of most Companies. While there is some minor variation in the details of these procedures, it is understood that all work well in their local application.

In view of this, it is suggested that the present regulations and contract procedures applying to Centrex I above 300 stations, also be extended to systems down to 100 stations. Minor changes in tariff wording may be necessary in a few cases in order to conform to the lower station minimum, but the general approach can be the same.

E376

Exhibit 37A

Change from Conventional PBX to Centrex

In the 1961 illustrative Centrex rate material it was suggested that conversions from PBX to Centrex, where the termination contract had not expired, be handled in the following manner:

- On a change to Centrex-CU service no termination charge would apply since the PBX equipment is reused in place.
- On a change to Centrex-CO service the termination charge would be applied.

While this approach seemed appropriate at the time, the Companies may now wish to consider modifying their tariffs to permit conversions of PBX to Centrex-CO without application of unexpired termination charges. This change would remove a disparity which now exists between Centrex-CO and Centrex-CU in some Companies, and would avoid penalizing a present PBX customer who converts to a better grade of service.

Revenue requirements studies both in the present case and in 1961 assumed that there would not be abnormal displacement of existing 701B facilities. This should not preclude, however, the selection of Centrex-CO where the economics involved, including the early retirement of an existing 701B, favor this choice.

E377
EXHIBIT 37B
"Addendum to Notes Accompanying Letter
dated February 1, 1965"

Centrex I Service

100 Station Minimum

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
37B

Addendum to Notes Accompanying Letter Dated February 1, 1965

(Distributed to Rate Representatives Only)

The following procedure has been designed to outline a method by which a Company may expand its present Centrex I offering to include systems with a minimum of 100 main stations. For illustrative purposes, it has been assumed that the Company's present minimum is at 300 stations and its present rate schedule is the same one shown in the Notes accompanying Mr. Kertz's letter of April 28, 1961.

1. Determine, as illustrated in Attachment 1, trunk revenue components required for various size systems for each of the Centrex I rate schedules to be filed. For illustrative purposes, the same basic trunk rates and schedules have been used as in the 1961 material. Because of lower trunk capacities with the smaller sized systems, however, the trunk increments per main station are somewhat higher than with over-300-station systems.

2. Develop monthly revenue requirements for station equipment and wiring. For illustrative purposes, the same amounts have been used as were developed for the 1961 study, and are shown in Attachment 2.

3. Develop revenue requirements for attendant positions. These along with the various assumptions are illustrated in Attachment 3.

4. Develop monthly revenue requirements for various size Centrex-CU systems on basis of 701B and 757 costs. This is shown in Attachment 4 together with a statement of various assumptions used.

5. Develop monthly main station revenue requirements for various size Centrex-CO systems on basis of No. 5 Crossbar costs as shown on Attachment 5.

6. Combine revenue requirements developed in Attachment 1, 2 and 4 along with average costs for continuous property circuits into separate Centrex-CU schedules for various sized installations. See Attachment 6.

7. Combine revenue requirements developed in Attachment 1, 2 and 5 along with average costs for continuous property circuits into separate Centrex-CO schedules for various size installations. See Attachment 7.

E378
Exhibit 37B

8. On the basis of estimated CU-CO mix, combine average Centrex-CU and Centrex-CO data into weighted average revenue requirements for various sized systems as shown in Attachment 8. For illustrative purposes, 70% CU and 30% CO has been used.

9. Convert weighted average revenue requirements in Attachment 8 into illustrative rate schedules.

E379
Exhibit 37B

Addendum

Attachment 1

Page 1 of 3

TRUNK REVENUE PER MAIN STATION PER MONTH

The same general approach for developing trunk revenue components is followed as was suggested in the original Centrex rate material.

1. For illustrative purposes, a typical range of statewide PBX trunk rates might be as follows:

Statewide Rate Group	Telephone In Local Service Area	Monthly Trunk Rate
I	0-6,500	$11.65 (FR)
II	6,500-14,000	13.90 (FR)
III	14,000-31,000	16.15 (FR)
IV	31,000-67,000	18.40 (FR)
V	67,000-135,000	21.10 (FR)
VI	135,000-275,000	23.35 (FR)
VII	275,000-375,000	24.85 (FR)
Large City Met. Area	Over 375,000	4.30 (MR)*

* In the case of the message rate trunks for the Large City case, it is assumed that no message unit allowance will apply with Centrex. A "readiness to serve" charge for a trunk might then be computed on the basis of the IMB rate less any normal message unit allowance.

For example, IMB rate is $9.05 with allowance of 90 message units. AMU's are charged for at 5¼¢ each

$9.05 - 90 x $0.0525 = $4.33, say $4.30.

2. Since the Company will provide under the basic charge sufficient trunks to give P.02 service, the following trunk revenue components can be computed:

E380
Exhibit 37B

Addendum

Attachment 1

Page 2 of 3

[illegible] 5.77 6.67 6.94

State-wide Rate Group	Monthly Trunk Rate	Total Monthly Revenue For System 100 Ma. Sta. Flat Rate 19 Trks.	150 Ma. Sta. Flat Rate 26 Trks.	200 Ma. Sta. Flat Rate 30 Trks.	250 Ma. Sta. Flat Rate 36 Trks.
I	$11.65	$221.	$303.	$350.	$419.
II	13.90	264.	361.	417.	500.
III	16.15	307.	420.	485.	581.
IV	18.40	350.	478.	552.	662.
V	21.10	401.	549.	663.	760.
VI	23.35	444.	607.	701.	841.
VII	24.85	472.	646.	746.	895.
		Message Rate 21 Trks.	Message Rate 28 Trks.	Message Rate 33 Trks.	Message Rate 39 Trks.
Large City Met. Area	4.30	90.	120.	142.	168.

1,

State-wide Rate Group	Monthly Trunk Rate	Component Per Main Station 100 Ma. Sta.	150 Ma. Sta.	200 Ma. Sta.	250 Ma. Sta.
I	$11.65	$2.21 2.85	$2.02 260	$1.75 [illegible]	$1.68 2.16
II	13.90	2.64	2.41 3[illegible]	2.09	2.00
III	16.15	3.07 340	2.80	2.43 27[illegible]	2.32 260
IV	18.40	3.50	3.19	2.76	2.65
V	21.10	4.01 352	3.66 3.21	3.17 2.78	3.04 2.65
VI	23.35	4.44	4.05	3.50	3.36
VII	24.85	4.72 480	4.31 430	3.73 360	3.58 3.50
Large City Met. Area	4.30	.90	.80	.70	.60

3. Three Centrex schedules might be offered corresponding to present schedules for systems with the 300-station minimum:

Centrex Schedule I - A flat rate offering for exchanges in Rate Groups I thru IV range.

Centrex Schedule II - A flat rate offering for exchanges in Rate Groups V thru VII range.

Centrex Schedule III - A message rate offering for large cities.

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Exhibit 37B

Addendum

Attachment 1

4. It is expected that most Centrex customers will be located in the larger exchanges. Actual trunk revenue components for each Centrex Schedule are, therefore, selected at the higher end of the rate group range.

	Component Per Main Station			
	100 Ma. Sta.	150 Ma. Sta.	200 Ma. Sta.	250 Ma. Sta.
Centrex Schedule I - Flat Rate	$3.40	$3.10	$2.70	$2.60
Centrex Schedule II - Flat Rate	4.60	4.20	3.60	3.50
Centrex Schedule III - Message Rate	.90	.80	.70	.60

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Exhibit 37B

Addendum

Attachment 2

Page 1 of 1

REVENUE REQUIREMENTS FOR STATION EQUIPMENT AND WIRING

Centrex-CU

	Per Main Station Per Month
Station Equipment and Wiring	$1.10
House Cable	.20
Total	$1.30

Centrex-CO

Station Equipment and Wiring	$1.08

Notes:
- The above revenue requirements are included in Attachments 6 and 7 for rate "packaging" purposes. These are the same amounts used for the original Centrex Rate Development.
- Regarding Centrex-CU, the requirement of $3.15 per main station per month shown under Schedule I - Flat Rate in the 300 main station column in the original study includes the $1.30 shown above with PBX equipment; whereas, this study separates these requirements and shows them differently.
- In connection with Centrex-CO, the revenue requirements for house cable is included in the revenue requirements for Outside Plant facilities which in turn, are combined with central office facilities in Attachment 5.

Addendum
Attachment 3
Page 1 of 1

E383
Exhibit 37B

ATTENDANT POSITIONS

It is recommended that the same charge apply for console and switchboard positions as presently filed for systems with over 300 stations. This will preclude any need to adjust the billing charges as customers change station requirements.

Since position revenue requirements are generally lower than most presently filed rates for these facilities, it is suggested that adjustments be made in the main station revenue requirements to compensate for the excess position revenue. In the illustrative calculations shown below, the following assumptions have been made:

1. Present filed tariff charge is $125 per month per position - either console or 608 switchboard.
2. 100 Ma. Sta. and 150 Ma. Sta. - 1 Position.
   200 Ma. Sta. and 250 Ma. Sta. - 2 Positions.
3. With No. 5 Crossbar and 701B - 95% consoles, 5% switchboards.
   With No. 101 ESS and 757 - 100% consoles.
4. Released loop operation used with both consoles and 608's.
5. Automatic call distribution of listed number traffic is provided where required.

	Per Month			
	100 Ma. Sta.	150 Ma. Sta.	200 Ma. Sta.	250 Ma. Sta.
	MR & FR	MR & FR	MR & FR	MR & FR
[illegible]B				
Rev. Requirement - Univ. Console	$ 87	$ 90	$ 57	$ 66
- 608B Swbd.	123	151	121	133
- 95/5 Mix	89	93	61	70
Present Tariff Charge	125	125	125	125
Rev. Adjustment - 1 Position	-36	-32	-	-
- 2 Positions	-	-	-128	-110
Rev. Adjustment Per Main Station	-.36	-.21	-.64	-.44
757 and No. 101 ESS				
[illegible]v. Requirement - Univ. Console	$ 17	$ 17	-	-
Present Tariff Charge	125	125	-	-
Rev. Adjustment - 1 Position	-108	-108	-	-
Rev. Adjustment Per Main Station	-1.08	-.72	-	-
No. 5 Crossbar				
Rev. Requirement - Univ. Console	$121	$121	$ 80	$ 90
- 608 Swbd.	136	139	108	109
- 95/5 Mix	122	122	81	91
Present Tariff Charge	125	125	125	125
[illegible]v. Adjustment - 1 Position	-3	-3	-	-
- 2 Positions	-	-	-88	-68
Rev. Adjustment Per Main Station	None	None	-.44	-.27

Addendum
Attachment 4
Page 1 of 3

E384
Exhibit 37B

PBX, AIOD, AND LLP FACILITIES FOR CENTREX-CU

	Revenue Requirements Per Main Station Per Month							
	100Ma. Sta.		150Ma. Sta.		200Ma. Sta.		250Ma. Sta.	
	MR	FR	MR	FR	MR	FR	MR	FR
701B								
New Installations	$7.27	$7.17	$6.15	$6.05	$5.91	$5.84	$5.64	$5.58
Modifications	7.35	7.25	6.30	6.19	5.97	5.91	5.74	5.67

Assume 25% new installations, 75% modifications.

	100Ma. Sta. MR	100Ma. Sta. FR	150Ma. Sta. MR	150Ma. Sta. FR	200Ma. Sta. MR	200Ma. Sta. FR	250Ma. Sta. MR	250Ma. Sta. FR
Weighted 701B	$7.33	$7.23	$6.26	$6.16	$5.96	$5.89	$5.72	$5.65
*Attendant Position - Revenue Adjustment	-.36	-.36	-.21	-.21	-.64	-.64	-.44	-.44
Net 701B	$6.97	$6.87	$6.05	$5.95	$5.32	$5.25	$5.28	$5.21
757								
New Installations (100%)	$8.31	$8.22	$7.23	$7.15	-	-	-	-
*Console or Swbd. Attendant Position - Rev. Adjustment	-1.08	-1.08	-.72	-.72	-	-	-	-
	$7.23	$7.14	$6.51	$6.43	-	-	-	-

Composite 701B/757

Up to 170 Stations, Assume 75% 701B, 25% 757.
Above 170 Stations, Assume 100% 701B.

	100Ma. Sta. MR	100Ma. Sta. FR	150Ma. Sta. MR	150Ma. Sta. FR	200Ma. Sta. MR	200Ma. Sta. FR	250Ma. Sta. MR	250Ma. Sta. FR
701B/757 Mix	$7.04	$6.94	$6.17	$6.07	-	-	-	-
All 701B	-	-	-	-	$5.32	$5.25	$5.28	$5.21

* See Attachment 3.

Underlying Assumptions for PBX, AIOD, (Automatic Identification of Out Dialed Calls) and LLP (Line Link Pulsing)

1. Covers cost of basic PBX switching, automatic number identification, and in-dialing facilities. Includes all Centrex I features.

   Note: The revenue requirements for AIOD have been included even though in some cases operator identification will be required for an interim period.

2. New Installations of 701B equipment assumes four-wire operation for the in-dial and local trains. Modifications of 701B equipment assume that the three-wire equipment on customer premises will remain and four-wire equipment would be added for the in-dial train. A complete change out of three-wire to four-wire is not contemplated.

3. The cost of Centrex CU is based on an assumed serving central office mix of 50% step-by-step and 50% No. 5 Crossbar. This differs from the 1961 study which assumed that, in addition, Panel and No. 1 Crossbar offices might also be used to serve Centrex-CU customers. The study for below 300 stations indicates that there are considerable costs involved in providing Centrex at the lower station levels from Panel, No. 1 Crossbar and Crossbar Tandem offices. Therefore, it is suggested that the tariffs be worded in such a manner ("where facilities permit") to preclude Centrex I service below 300 stations from being provided from these types of offices. Further No. 1 Crossbar development is underway which may enable Centrex I below 300 stations to be provided as economically as No. 5 Crossbar at some time in the future. The assumptions regarding central office mix reflect the situation that might reasonably be expected to exist for the next five years.

101 ESS

Since it appears that 701B and 757 type systems will be the predominant type used for the next five years for providing Centrex-CU, the revenue requirements have been based entirely upon such systems. However, those Companies planning extensive use of the 101 ESS should include 101 ESS costs in their Centrex-CU studies. In such cases, the following may be helpful:

	Number of Stations Per Customer		
	100Ma. Sta.	150Ma. Sta.	200Ma. Sta.
101 ESS Common Control Unit			
Operating with 5 Switch Units	$11.53	$ 8.[illegible]	$ 6.48
Operating with 10 Switch Units	8.57	6.15	4.[illegible]5
Operating with 20 Switch Units	7.04	5.11	-

Using the above information and assuming a fill of 10 switch units per control unit and an average of 150 stations per switch unit the following gives an indication of the revenue requirements.

	Per Main Station Per Month
	150 Ma. Sta.
101 ESS before Revenue Adjustment for console	$6.15
Console - Revenue Adjustment (See Attachment 3)	-.72
	$5.43 (Excluding trunks, station equipment, etc.)

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Exhibit 37B

Addendum
Attachment 4

The 101 ESS revenue requirements vary widely with the number of switch units and the number of stations per customer. The average number of switch units per control unit will not only depend upon the number of customers furnished Centrex I but also those furnished Centrex II, Series 200 and Series 300 communications service.

While these notes cover Centrex I service only, incremental cost for providing Centrex II, TOUCH-TONE and certain other features are relatively small with 101 ESS. The higher average station rate where all these features are provided will permit use of an 101 ESS where the total line fill is somewhat lower than if the equipment was used for Centrex I alone.

CENTRAL OFFICE AND OUTSIDE PLANT FACILITIES FOR CENTREX-CO

	Revenue Requirements Per Main Station Per Month							
	100Ma. Sta.		150Ma. Sta.		200Ma. Sta.		250Ma. Sta.	
	MR & FR		MR & FR		MR & FR		MR & FR	
Phase I and II No. 5 Crossbar	$ 9.15		$ 8.76		$ 9.05		$ 8.84	
Phase III No. 5 Crossbar	9.60		9.21		9.50		9.28	
Using a 50%-50% Mix:								
50% Phase I and II	$ 4.58		$ 4.38		$ 4.53		$ 4.42	
50% Phase III	4.80		4.61		4.75		4.64	
Total before credit for pairs included in trunk revenues	$ 9.38		$ 8.99		$ 9.28		$ 9.06	
	MR	FR	MR	FR	MR	FR	MR	FR
Less the number of trunk pairs or loops included in the trunk revenues, (Credit is applied @ $2.59 monthly per loop for 21, 28, 33 and 39 trunks, respectively for message rate systems and 19, 26, 30 and 36 trunks for flat rate systems.)	-.54	-.49	-.48	-.45	-.43	-.39	-.40	-.37
Total	$8.84	$8.89	$8.51	$8.54	$8.85	$8.89	$8.66	$8.69
Attendant Position - Revenue Adjustment	NONE	NONE	NONE	NONE	-.37	-.44	-.27	-.27
Net Revenue Requirements	$8.84	$8.89	$8.51	$8.54	$8.48	$8.45	$8.39	$8.42

NOTES:

1. Above figures include all central office equipment, outside plant facilities, and house cable for providing Centrex I service. Not included are attendant positions, continuous property mileage, station equipment and wiring, and exchange trunk revenues.

2. The revenue requirements for ESS No. 1 have not been included since the number of Centrex stations served will be relatively small within the next five years.

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Exhibit 37B

Addendum
Attachment 5
Page 2 of 2

3. Average station loop lengths of 1.5 miles have been used as was used in the 1961 study. It is recognized, however, that local conditions in many Companies may warrant use of a different figure.

   It is particularly important that each Company estimate the cost of outside plant for Centrex-CO in its own local situation, since this is a relatively large component of the total Centrex-CO revenue requirements.

E389 Attachment 6
Exhibit 37B Page 1 of 1

CENTREX-CU - RATE DERIVATIONS

	Revenue Requirements Per Main Station Per Month			
	100Ma. Sta.	150Ma. Sta.	200Ma. Sta.	250Ma. Sta.
Schedule I - Flat Rate				
PBX, AIOD, and LLP Equipment	$ 6.94	$ 6.07	$ 5.25	$ 5.21
Exchange Trunks	3.40	3.10	2.70	2.60
Station Equipment and Wiring (Including House Cable)	1.30	1.30	1.30	1.30
*Continuous Property Circuits	.08	.08	.08	.08
Total	$11.72	$10.55	$ 9.33	$ 9.19
Schedule II - Flat Rate				
PBX, AIOD, and LLP Equipment	$ 6.94	$ 6.07	$ 5.25	$ 5.21
Exchange Trunks	4.60	4.20	3.60	3.50
Station Equipment and Wiring (Including House Cable)	1.30	1.30	1.30	1.30
*Continuous Property Circuits	.08	.08	.08	.08
Total	$12.92	$11.65	$10.23	$10.09
Schedule III - Message Rate				
PBX, AIOD, and LLP Equipment	$ 7.04	$ 6.17	$ 5.32	$ 5.28
Exchange Trunks	.90	.80	.70	.60
Station Equipment and Wiring (Including House Cable)	1.30	1.30	1.30	1.30
*Continuous Property Circuits	.08	.08	.08	.08
Total	$ 9.32	$ 8.35	$ 7.40	$ 7.26

***Continuous Property Circuits**

This represents an allocation of present revenues obtained from charges for mileage facilities furnished to connect stations in a different building on the same continuous property of a customer. For systems under 300 stations in size it is estimated that an average of 10% of a customer's stations might be so involved. Related to a typical on-premises mileage charge of $0.75 per line, this is equivalent to about $0.08 per total main station.

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Exhibit 37B

Addendum
Attachment 7
Page 1 of 1

CENTREX-CO - RATE DERIVATIONS

	Revenue Requirements Per Main Station Per Month			
	100Ma. Sta.	150Ma. Sta.	200Ma. Sta.	250Ma. Sta.
Schedule I - Flat Rate				
Equipment in Serving Central Office, Outside Plant Facilities and House Cable	$ 8.89	$ 8.54	$ 8.45	$ 8.42
Incoming and Outgoing Traffic	3.40	3.10	2.70	2.60
Station and Wiring	1.08	1.08	1.08	1.08
*Continuous Property Circuits	.08	.08	.08	.08
Total	$13.45	$12.80	$12.31	$12.18
Schedule II - Flat Rate				
Equipment in Serving Central Office, Outside Plant Facilities and House Cable	$ 8.89	$ 8.54	$ 8.45	$ 8.42
Incoming and Outgoing Traffic	4.60	4.20	3.60	3.50
Station and Wiring	1.08	1.08	1.08	1.08
*Continuous Property Circuits	.08	.08	.08	.08
Total	$14.65	$13.90	$13.21	$13.08
Schedule III - Message Rate				
Equipment in Serving Central Office, Outside Plant Facilities and House Cable	$ 8.84	$ 8.51	$ 8.48	$ 8.39
Incoming and Outgoing Traffic	.90	.80	.70	.60
Station and Wiring	1.08	1.08	1.08	1.08
*Continuous Property Circuits	.08	.08	.08	.08
Total	$10.90	$10.47	$10.34	$10.15

*Continuous Property Circuits

See note on Attachment 6

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Exhibit 37B

Addendum
Attachment 8
Page 1 of 1

REVENUE REQUIREMENTS

PER MAIN STATION PER MONTH

	Schedule	100 M.S.	150 M.S.	200 M.S.	250 M.S.
Centrex-CU	I	$11.72	$10.55	$ 9.33	$ 9.19
	II	12.92	11.65	10.23	10.09
	III	9.32	8.35	7.40	7.26
*Centrex-CO	I	$13.20	$12.55	$12.06	$11.93
	II	14.30	13.55	12.86	12.73
	III	10.40	9.97	9.84	9.65
#Weighted Average	I	$12.16	$11.15	$10.15	$10.02
	II	13.33	12.22	11.02	10.88
	III	9.64	8.84	8.13	7.99

* The Centrex-CO revenue requirements have been reduced by 25¢, 35¢ and 50¢ for Schedules I, II, and III respectively since such amounts are to be set up as incremental monthly rates for Centrex-CO installations. These charges are intended to reflect in a general way savings to the customer in not having to provide floor space and power for switching equipment usually located on the customer's premises.

Assumes 70% Centrex-CU, 30% Centrex-CO.

E392
EXHIBIT 39
February 26, 1965 letter from F.C. Smith
to S.H. Jones *et al*.

Centrex II Rate Principles and Illustrative Rate Treatment

GEN'L. COMMERCIAL DEPT.
MAR 11 1965
TO.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK, N. Y. 10007

AREA CODE 212 393-9800

February 26, 1965

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
39

Mr. S. H. Jones, Com'l Opers. Engr.
The Mountain States Tel. & Tel. Co.
931 Fourteenth Street
Denver, Colorado 80202

Illustrative rate material for Centrex II which was promised in Mr. Alston's letter of October 19, 1964 has been completed and the conclusions are discussed in the attached notes. It is recommended that the Companies now proceed in establishing rate treatment for this new offering.

Centrex II, as you know is the more deluxe version of our Centrex line and includes dial transfer, consultation hold, add-on conference, and trunk answer any station, in addition to the basic features provided with Centrex I. This packaging approach was discussed in more complete detail in Mr. Kertz's letter of May 14, 1964.

Since it is planned to offer Centrex II as a complete service, the filing of a full set of rate schedules comparable to those filed for Centrex I is recommended. Centrex II would be offered in all system sizes above a minimum of 100 unrestricted main stations. While the rate level indicated by System average data amounts to an increment of $0.75 per station above Centrex I rates, a number of the parameters affecting costs will vary between serving areas, and each Company will, of course, wish to consider its own situation in developing its offering.

In moving ahead with PBX-Centrex packaging, we would like to emphasize two important principles. First, the array of features in each package must be kept intact, and the individual features of one package should not be offered as optional arrangements with other packages. This precludes, for example, the offering of automatic station identification of outward toll calls to customers who have Series 100, 200, or 300 Communications Service, or dial transfer to Centrex I customers.

Secondly, each service package must be provided uniformly and completely throughout any one customer system. Centrex II service should not be offered on an individual station basis or at selected locations. A customer should not be provided with Centrex II at a primary location, for example, and Centrex I at a secondary or satellite location.

E393
Exhibit 39

In addition to the rate principles outlined in the attached Notes, an Addendum discussing in detail the application of these principles to the development of specific rate schedules has been prepared and is being sent directly to your Rate people. Mr. Froggatt is also sending information to the Chief Engineers detailing a suggested method of developing individual costs studies for each Company.

At the request of Messrs. Collins, Froggatt, Mapes and Dyer, copies of this letter are being sent to the General Traffic Managers, Chief Engineers, and Public Relations Vice Presidents. The Marketing Department is also planning to send information regarding Centrex II to the General Marketing Managers.

Scott Shepherd (Area Code 212 393-2523) is familiar with this subject and is available to discuss the rate aspects with your people.

Yours very truly,

Smith

for Assistant Vice President

Attachment
Notes

To all General Commercial Managers
(Copies sent to General Traffic
Managers, Chief Engineers, and
Public Relations Vice Presidents)

Explanatory Statement
(To addressed names only)

E394
Exhibit 39

Centrex II

Notes On Rate Principles and Illustrative Rate Treatment

(Accompanying Letter Dated February 26, 1965)

The following outlines the rate principles to be considered in establishing a Centrex II offering, together with an example of a rate schedule incorporating these principles. Additional material discussing the steps to be taken in developing such a rate schedule for each Company has been prepared and is being sent directly to Rate people.

General Rate Approach

As in the case of Centrex I, rates should be developed with the emphasis on the service to be provided rather than the specific facilities or hardware which might be used to provide the service. Furthermore, it is intended that Centrex II be a separate and distinct offering rather than an incremental charge to be applied to Centrex I rate schedules. This approach will retain the Centrex II package identity among the array of PBX and Centrex packages outlined in Mr. Kertz's letter of May 14, 1964, "Advancing the Dial PBX Line--Status of Rate Development Activity."

Service and Features

The service and features provided on a "package" basis with Centrex II are as follows:

- All the features of Centrex I

PLUS

- Dial Transfer
- Consultation Hold
- Add-on Conference
- Trunk Answer Any Station

Although it would be possible in Centrex-CO installations to provide Centrex II features at some stations and Centrex I features at other stations within the same system, Centrex I and Centrex II cannot be mixed within the same Centrex-CU installation. Since it is desirable to preserve the Telephone Company's choice of serving method i.e., Centrex-CO or Centrex-CU, the offering is contemplated only where all unrestricted stations of a Centrex System may be equipped with Centrex II features.

Present equipment will not permit passing dial pulses back over a tie line on which an incoming call has been completed to a satellite station. This will restrict the Centrex II offering at secondary locations to either of two types of installations:

Exhibit 39

- Secondary locations in which the stations are wired back to the switching equipment at the primary location using a pair per station.

- Satellites on which all stations are equipped for TOUCH-TONE service and at least some stations at the primary location are equipped for TOUCH-TONE service.

The auxiliary services which are presently available with Centrex I will be available with Centrex II. These may be provided on an optional basis at additional charges. Among these are:

- TOUCH-TONE Service
- Tie Lines
- Switched Network Access Lines (CCSA)
- WATS Lines
- Foreign Exchange Lines
- Attendant Conference
- Code Restriction
- Connection to Customer's Paging System
- Dial Dictation Recording Trunks

Revenue Requirements

Revenue requirements data have been developed by A.T.&T. Engineering based upon the most recent marketing, traffic, equipment and cost information available. All data, however, are on a System average basis and should be considered illustrative only. A booklet containing an outline of the development of these revenue requirements has been prepared and will be distributed for use by Chief Engineers.

The incremental revenue requirements per station for Centrex II at intervals between 100 and 3600 stations using No. 5 Crossbar, 701B and 757A equipment vary widely. Adding Centrex II features to existing Phase I and II No. 5 Crossbar marker groups is quite costly e.g., the monthly incremental revenue requirement exceeds what might be considered a marketable range where fewer than 2000 Centrex II stations are working in a single marker group. On the other hand, Centrex II features in a Phase III No. 5 Crossbar marker group are relatively low. The "mix" of serving methods assumed in each Company together with the estimated Centrex II development will result in considerable variation in the weighted incremental revenue requirement for Centrex II between Companies.

Illustrative Rate Treatment

Because of the different conditions involved in each state, it is impractical to contemplate a single rate schedule for Systemwide application. The following rate schedule based on a particulr "mix" of serving methods and Centrex II development will serve to show the makeup of a Centrex II offering.

E396
Exhibit 39

A. At Primary Location - Unrestricted Main Stations:

		Monthly Charge Per Station				
		Centrex-CU				Centrex-CO
	Telephones In L.S.A.	*First 100	Next 100	Next 700	Over 900	Added Charge
Schedule I (Flat Rate)	Under 67,000	$13.00	$ 8.75	$ 7.75	$ 5.25	$0.25
Schedule II (Flat Rate)	67,000 to 375,000	14.25	10.50	8.50	5.75	0.35
Schedule III (Message Rate)	Large City Metro Area	10.25	7.00	6.50	4.75	0.50

* Minimum charge at primary location is that for 100 unrestricted Main Stations.

B. At Secondary Locations - Unrestricted Main Stations:

		Monthly Charge Per Station				
		Centrex-CU				Centrex-CO
	Telephones In L.S.A.	#First 50	Next 250	Next 600	Over 900	Added Charge
Schedule I (Flat Rate)	Under 67,000	$10.25	$ 9.75	$ 7.75	$ 5.25	$0.25
Schedule II (Flat Rate)	67,000 to 375,000	11.50	11.00	8.50	5.75	0.35
Schedule III (Message Rate)	Large City Metro. Area	8.75	7.75	6.50	4.75	0.50

No minimum station requirement at secondary locations.

Attendant's Positions--It is recommended that the same charges apply for console and switchboard positions as presently apply for Centrex I systems.

Bridged Stations--In the original illustrative rate material for Centrex it was assumed a bridged station adds about 30% to 40% as much as a main station to the call carrying load of the Centrex switcher and central office. Since Centrex II main stations will carry a higher rate than Centrex I main stations, a similar relationship should hold for bridged stations. A $0.25 per bridged station increment above the Centrex I bridged station appears reasonable. Therefore in the illustrative rate schedule the following would apply:

Exhibit 39

	Each Bridged Station
Schedules I and II	$3.25
Schedule III	$3.00

Restricted Stations--Since Centrex II features are not available to restricted stations, it would seem appropriate to apply the same rate for restricted stations in Centrex II offerings as is being applied in Centrex I offerings.

Dormitory Stations--It is possible in those Companies in which a dormitory station rate has been filed that a school with administrative stations and dormitory stations might request Centrex II primarily for administrative stations. For reasons already noted it is not considered desirable to offer Centrex II features to some stations and deny them to others within the same Centrex even when the serving method might permit. The filing of a dormitory station rate as a companion to Centrex II, therefore, would seem to be a matter of administrative necessity even though the market for Centrex II at dormitory stations, per se, would be small. The following rate treatment would apply in the example above:

	Per Dormitory Main Station
School bills and collects student tolls	Present rate plus $.75
Telephone Company bills and collects student tolls.	Present rate plus $.75

Service Connection Charges and Minimum Service Periods

It is proposed that presently established service connection charges for Centrex I would also apply for Centrex II. No non-recurring charge is contemplated for conversion of an existing Centrex I to Centrex II.

Since it is recommended that no non-recurring charge apply for conversion from Centrex I to Centrex II, some protection would be justified to avoid trial upgrades of Centrex I to Centrex II for a short period. Therefore, it is suggested that when existing Centrex I service is converted to Centrex II, the higher station rates apply for a minimum period of one year.

Contingent Termination Liability

Most Companies have established some form of protection in the event a customer initiates an early disconnect of his Centrex service. It is suggested that the present form of protection being afforded under the Centrex I offering be extended to the Centrex II offering. Since the non-recoverables in the event of the disconnect of Centrex II service over those in the event of the disconnect of Centrex I service are relatively small, it is suggested that no increment be added to the termination liability in conjunction with Centrex II service to cover the difference. This approach will overcome many of the problems inherent in the administration of termination liability on a different basis for each of the Centrex offerings.

E398
Exhibit 39

USOC Assignments

Codes for this offering are as follows:

CODE	DESCRIPTION
25J	Centrex-CO Measured Business Service - Centrex 2
25V	Centrex-CU Measured Business Service - Centrex 2
26K	Centrex-CO Flat Business Service - Centrex 2
26V	Centrex-CU Flat Business Service - Centrex 2

E399
EXHIBIT 40
June 7, 1971 A.X. Iehter memorandum

Mr. J. Griffith, HQ Acctg

FILE COPY
RETURN TO
J. B. GRIFFITH

Jim —
Will appreciate any comments you care to offer. Art

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
40 id.

DEVELOPMENT OF A BRANCH EXCHANGE RATE STRUCTURE INCLUDING PBX WITH DIRECT INWARD DIALING

COMPETITIVE ASPECTS, CROSS ELASTICITIES WITHIN THE BRANCH EXCHANGE SPECTRUM, AND FEDERAL EXCISE TAX IMPLICATIONS

The introduction of Direct Inward Dialing (DID) and Automatic Identification of Outward Dialing (AIOD) as features available to PBX system subscribers will require a major restructuring of the Branch Exchange service offerings. The four basic service options available to customers may be as follows:

PROPOSED PRIVATE BRANCH EXCHANGE SERVICE OFFERINGS

Optional Systems	System Features				
	Basic PBX Features	Direct Inward Dialing	Station Identif. (CAMA or AIOD)	Swthg. Eqp. Located on Telco Prem.	Additional System Features*
PBX-A	X				
PBX-B	X	X			
PBX-C1	X	X	X		
PBX-C2	X	X	X		X
PBX-D1	X	X	X	X	
PBX-D2	X	X	X	X	X

* Additional System Features are Call Transfer-Individual, Consultation Hold, Add-on and Trunk Answer Any Station.

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E400
Exhibit 40

Existing customer's would be converted to the new rate structure in the following fashion:

Existing systems rated as	would convert to .....
Manual PBX	PBX-A
Dial Systems	
Class E Type 1, 6 & 7	PBX-[illegible] A
Series 200 & 300	PBX-[illegible] A
Centrex CUI	PBX-C1
Centrex CUII	PBX-C2
Centrex COI	PBX-D1
Centrex COII	PBX-D2

17342

sp Before a new structure of the customer options such as this could be aopted, many aspects of the new services must be examined in detail. This memorandum will deal with several which bear upon the design of the rate structure for the range of customer options.

COMPETITIVE ASPECTS

Several unique competitive aspects play an important part in the design of this rate structure. First of all, for all practical purposes it does not seem likely that outside suppliers will offer a service featuring switching of traffic on the suppliers premises-- the economics of the situation would appear to make such an offering unlikely. Consequently, from an anti trust standpoint our PBX is in a "Caesar's wife" position. We must be prepared to defend the prices for that offering and prove it is:

#1
PBX-B
i. option

- priced above the floor of costs.

- not subsidized by any other service.

sp For example, one or the other of our current Centrex CO or CU offerings are vulnerable to regualtory criticism on the basis of being priced below the floor of costs (as the rates for both are based upon blended cost factors).

In the establishment of rate levels for each of the services within the branch exchange spectrum, each offering must stand - and compete - on its own merits.

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E401
Exhibit 40

CROSS ELASTICITY ASPECTS OF THE BRANCH EXCHANGE RATE STRUCTURE

Under today's rate structure, Centrex service is the "top of the line" - and, as such, is priced at levels considerably higher than those for the established PBX offering, which is basically an interchangeable service! Even so, and despite an inherent tax ~~tax~~ advantage enjoyed by the current PBX offering (which is explained in detail in a subsequent section) Centrex, as the following figures attest, is far and away the faster growing revenue producer:

	ANNUAL REVENUE FIGURES* BELL OF PA.			
	'67	'68	'69	'70
Manual PBX	$1,173	$1,123	$ 950	$ 741
Dial PBX	4,374	4,694	5,212	5,483
Centrex	6,182	7,295	9,079	10,588

*000 omitted

It seems fair to conclude that the features of Centrex service are of sufficient value to customers to overcome the not insubstantial tax liability in addition to its basically higher rates.

The above data has other implications as well. The $30M (est.) inested in facilities to furnish Centrex inlcudes $18M (est.) in Centrex CO investment and $12M (est.) in Centrex CU investment. As this CO/CU ratio was established based upon Company considerations, and, any distortion of it would be uneconomical from a Company standpoint, there are obvious concerns surrounding a change in the rate structure and the introduction of new customer service options.

sp

ell

FEDERAL EXCISE TAX IMPLICATIONS

Currently applied IRS rulings provide for the application of the 10% FET in two different ways:

- On PBX systems, the tax applies to the exchange trunks only.
- On Centrex systems, as there is currently no separate pricing element for trunks, the tax is applied to the unrestricted station rate (which includes the trunk element).

As a result of these two different applications, the FET liabilities to Centrex systems are substantially higher than those of PBX systems. For example, the case of the duPont account the difference would amount to nearly $8,000 per month.

Moreover some question has arisen as to the application of the FET to associated station equipment, as a result of an IRS audit in Southerwestern Bell. If the new groundrules which were suggested by the IRS auditor were adopted, the difference to duPont would amount to approximately $17,000 per month.

E402
Exhibit 40

It is assumed that when the PBX-C option is established, current Centrex CU customers will be converted to those rates, with trunks charged for separately, thereby immediately reducing their tax liability.

The question of the FET liability for the PBX-D option is a matter of concern. If it continues to bear the burden of the additional tax liability:

- it will be at a competitive disadvantage as regards outside supplier systems
- customers may request uneconomic conversions from PBX-D to PBX-C in order to gain a tax advantage.

POSSIBLE WAYS OF EQUALIZING THE FET APPLICATIONS

At least two alternative means of preventing such a undesirable situation are apparent.

- sp All PBX offerings could be rated in such a fashion that they would havy FET liabilities basically like those of the current Centrex offering (no separate exchange access pricing element).
- All PBX offerings could be rated in such a fashion that they had FET liabilities basically like those of the current PBX offering (with a separate exchange access pricing element).

sp The first of these would require that the PBX rate strucutres be developed incorporating the trunking element into the station rate. The Company would then furnish a quantity of trunks capable of handling the customer's traffic at a specified grade of service. In all probability, the DID and AIOD elements would also have to be incorporated into the station rate and furnished on an "as needed" basis.

This alternative was not seriously considered as it seems basically unfair to design a rate structure in such a way so as sp to purposefully maximize custoer FET obligations just to protect our investments.

The second alternative appears to have merit, however. What is involved here is the establishment of a rating component in all of the options for the exchange access ~~which~~ This component would bear the FET burden just as trunks do for PBX systems under currently effective tariffs. This is easily accomplished for all of the options (as trunks are physically present) except ~~PBX-D~~ (the option replacing Centrex C.O). In this offering individual station loops are utilized sp to carry both echange and intra system traffic.

PBX-D

ROTECTED

E403
Exhibit 40

THE DEVELOPMENT OF RATES FOR THE PBX-D OPTION

While Centrex CO service is furnished today to about 60,000 Centrex stations in Pennsylvania, the Company's option to serve these systems on a CO or CU basis at its discretion was an important factor in the development of the rates applied. In the absence of this Telco option, structural and/or rate level changes would be clearly supportable. The mere existence of 60,000 Centrex stations to which the new rates will be applied however (without any change whatsoever in service furnished), mitigates strongly in favor of changes of a minimal nature.

The rates for the PBX-D offering must also be in reasonable relationship to those of the PBX-C option (the structure and rate levels of which have not, as yet, been established) for cross elasticity purposes since PBX - C and D are basically interchangeable services.

It is important, therefore, to examine what type of rate structural and level changes can be logically considered in order to (1) maintain near parity between offerings and (2) equalize the tax liabilities of the interchangeable services.

In that regard, let us first consider the current pricing elements of the Centrex CO/CU rate structure:

	Type of Rates Applied			
Centrex CO/CU Rate Elements	Schedule Differential by Exchange Category	Sliding Scale of Charges based upon System Size	Flat Charge per each)	Federal Excise Tax Application
Attendant Equipment			X	No
Unres. Main Station				
Main Location	X	X		Yes
Other Locations	X	X		Yes
Restricted Main Stations			X	
Bridged Station of:				
Unres. lines	X			Yes
Restric. lines			X	No
Incremental charges for:				
CO service	X			No
Centrex II features			X	No

Several aspects of this structure could logically be eliminated or modified based upon identifiable cost considerations in the pricing of COBX:

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E404
Exhibit 40

- Charges for restricted stations at the main location and at non-satellite locations could more nearly resemble main station charges as loop costs become a more critical cost component.
- Restricted stations at satellite locations could be attractively priced as economies are present in such arrangements and such services should, therefore, be encouraged.
- Similarly bridged station service, at any location, could be attraitively priced as this service, too, can be more economically provided.

SR

- the sliding scale type schedules could be compressed as they currently reflect trunking economies inherent to larger line group operation, which would not be present in a CO only (individual loops) offering.
- the CO incremental charge would, of course, not be necessary as an identifiable rating element.

In consideration of the foregoing factors a rate structure such as the following appears supportable from both a cost and reasonableness standpoint:

Proposed Rate Elements for PBX-D option	Types of Rates Applied: Schedule Differential by Exchange Category	Sliding Scale of Charges based upon System Size	Flat Charge (per each)	Federal Excise Tax Application
Attendant Equipment			X	No
Station Charges				
PBX-DI 1		X		No
PBX-DI 2		X		No
PBX-D Access Charges:				
Main Location, per PBX-D station	X	X		Yes
Other Locations, per PBX-D station	X	X		Yes
Restricted Stations			X	No
Bridged Stations of:				
PBX-D Stations	X			No
Restric. Stations			X	No

In the following paragrpahs, each of the various pricing elements are discussed individually.

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E405
Exhibit 40

Attendant Equipment

Charges for the attendant equipment would be the same as those of Centrex attendant equipment under the current Centrex tariff.

PBX-D Station Charges

The PBX-DI station charge would be based upon the cost of furnishing the station and its wiring; the house cable; the intra customer traffic; and the system features of station identification, transfer and incoming call distribution. A second (higher) level of charge would also be established for PBX-
2 DH, where such service is furnished, reflecting the additional costs involved for the PBX-DH 2 features.

A two step sliding scale rate would apply (above and below 900 stations) reflecting the economy of scale aspects intrinsic to larger systems.

The PBX-D station charges, like PBX station charges, would not be subject to FET.

Restricted and Bridged Stations

The features, rates and tax liability of such stations would be basically the same as comparable services now furnished under Centrex.

PBX-D System Access Charges

The system access charges would be based upon the costs associated with furnishing inward and outward exchange service and would include the station loops furnished to carry that traffic.

A sliding scale of charges based upon system size would apply.

Separate schedules would apply for main locations and other locations.

Exchange differenitals would also apply, on the same basis as is used in the currently effective Centrex rate structure.

The PBX-D system access charges, like PBX-A, B, and C trunks, would be subject to FET application

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E406
Exhibit 40

ILLUSTRATIVE PBX-D RATES

The following illustrative rates were developed based upon the cost data which support the currently effective Centrex tariff. Additional study will be required before firm rate schedules can be developed:

	Exchange Schedules		
	A	B	C
Attendant Equipment			
per position ↓	$175.00	$175.00	$175.00
PBX-D Station Charges (Non taxable)			
PBX-DI 1			
1st 900 stat., per stat.			
over 900 stat, per stat.	3.50	3.50	3.50
PBX-DI ~~1~~2	2.50	2.50	2.50
1st 900 stat., per stat.	5.00	5.00	5.00
over 900 stat., per stat.	4.00	4.00	4.00
1			
System Access Charges (taxable)			
Main Location -			
1st 100 stat., per stat.	6.75	7.25	5.75
Next 200 stat., per stat.	3.50	4.00	2.25
Next 600 stat., per stat.	2.50	3.00	2.25
Over 900 stat., per stat.	1.75	2.00	1.50
Other Locations			
1st 50 stat., per stat.	5.00	6.50	4.25
Next 250 stat., per stat.	4.50	5.50	3.25
Next 600 stat., per stat.	2.50	3.00	2.25
Over 900 stat., per stat.	1.75	2.00	1.50
Restricted Stations	3.50	3.50	3.50
Bridged Stations			
- of PBX-D stations	3.75	3.75	3.40
- of Restricted stations	3.25	3.25	3.25

THE IMPACT ON FET REVENUES

It should be clearly understood that FET revenues are diminished under this plan in two different ways:

- by converting Centrex CU customers to PBX-C rates and applying charges (and, therefore, taxes) per trunk, whereas the higher per station application is currently employed.
- by converting Centrex CO customers to PBX-D which has two separate rate elements per station, only one of which is taxable.

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E407
Exhibit 40

This lessened FET revenues appears to be required, however, to insure that our interchangeable services not havy dissimilar tax liabilities and that outside supplier systems not be accorded a significancompetitive advantage.

Even though aggregate FET revenues will be reduced, the real effect of the rate plan proposed is to simulate the amount of tax revenues that would accure under the current branch exchange rates if all systems were provided with exchange trunks as an identifiable, and therefore taxable, rate element.

This form of tax application would appear to be in line with current tax applications, as specified in the A.T.&T. Comptrollers Department manual Federal Excise Tax on Communications Services, which reads as follows:

"Private Communication Service, Defined

2.24 The term private communications service includes private intercommunicationystems and private lines along with associated services necessary or unique to the private communication service, if a separate charge is made for such servcies. Charges for private communication service are nontaxable regardless of whether such private services may be connected through switching with local telephone service, toll telephone service, or teletypewriter exchange service. Therefore, charges for (1) PBX systems (excluding trunk lines) and (2) Centrex systems (excluding unrestricted main centrex stations) are nontaxable private communication service."

SUMMARY

Studies are now underway to compare individual customer rate and tax liability changes which will result from the application of these new charges to existing accounts. Additionally, revised cost data will be required to gauge the impact of providing central office vs. customer premises switching at the customer's option.

The introduction of DID and AIOD will also require other several adjustments to the PBX rate structure. These will be seprately evaluated.

AXI/ 6-7/71

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E408

EXHIBIT 41B

Tariff pages filed by Bell of Pennsylvania

[illegible] OF 11/72

PREPARED FOR USE OF COUNSEL ONLY

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Twelfth Revised Sheet 1
Canceling Eleventh Revised Sheet 1

1F

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
41B

CENTREX SERVICE

A. GENERAL

1. SERVICE FEATURES

a. Centrex I Service provides for the following service features:

Direct Inward Dialing

Incoming calls from the exchange or toll network may be dialed directly to completion to any called station served by the Centrex main or satellite switching equipment without the help of an attendant.

Direct Outward Dialing

Outward calls may be dialed directly to completion from any unrestricted station served by the Centrex main or satellite switching equipment without the help of an attendant.

[illegible]n to Station Calling

Calls may be dialed directly to completion between any two stations of a Centrex System.

Call Transfer - Attendant

An indialed call to a station may be transferred to another station on the same Centrex System with the help of an attendant.

Intercept

Calls dialed to unassigned numbers may be routed to an attendant or to a recorded announcement.

Station Identification

An itemized list of toll calls and the total number of message units for multi-unit local calls are associated on the bill with the number of each originating station line.

Station Hunting

Station lines may be arranged in groups of up to 10, so that calls to a busy line in a group will be completed to any higher numbered line in the group which is not busy. Eight such groups per 100 station lines may be provided. Additional hunting arrangements may be provided within the normal capability of the serving equipment.

Night Answering Service - Available With Attendant Position (C)

A key telephone will be provided on the same premises as the attendant positions with facilities to permit the receipt of three simultaneous calls. Such night service may be activated by an appropriate control arrangement at the attendant position.

Attendant Service - Available With Attendant Position (C)

Incoming calls to the main listed number are answered by an attendant, who may complete the call to the desired station. An unrestricted station user may dial the attendant over attendant lines to secure help in the completion of an outgoing call.

b. Centrex II Service provides for the following service features in addition to those included in 1.a. above.

Call Transfer - Individual

By operation of the switchhook, a station user may hold an indialed call, dial another station line or the attendant and transfer the incoming call to that party.

Consultation Hold

By operation of the switchhook, a station user may hold an existing indialed call, dial another station line or the attendant for consultation and then return to and complete the original call.

Add-On

By operation of the switchhook, a station user may hold an indialed call, dial another station line, and then, by again operating the switchhook, add the incoming call to the connection for a 3-way conversation.

Trunk Answer From Any Station - Available With Attendant Position (C)

When the attendant equipment night service feature is activated, any unrestricted station user at the main location can answer incoming calls indialed to the attendant by dialing a prearranged code. After the incoming call is answered it may be transferred to another station in the same manner as described under Call Transfer-Individual above.

(C) Indicates change.

ISSUED SEPTEMBER 1, 1972.

EFFECTIVE NOVEMBER 1, 1972.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E409
Exhibit 41B

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. RATE SHEET NO. 7 SERIES OF 11/0
Section 20
Eleventh Revised Sheet 1
Canceling Tenth Revised Sheet 1

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

A. GENERAL

1. SERVICE FEATURES

a. Centrex I Service provides for the following service features:

Direct Inward Dialing

Incoming calls from the exchange or toll network may be dialed directly to completion to any called station served by the Centrex main or satellite switching equipment without the help of an attendant. (C)

Direct Outward Dialing

Outward calls may be dialed directly to completion from any unrestricted station served by the Centrex main or satellite switching equipment without the help of an attendant. (C)

Station to Station Calling

Calls may be dialed directly to completion between any two stations of a Centrex System.

Call Transfer - Attendant

An indialed call to a station may be transferred to another station on the same Centrex System with the help of an attendant.

Intercept

Calls dialed to unassigned numbers may be routed to an attendant or to a recorded announcement.

Station Identification

An itemized list of toll calls and the total number of message units for multi-unit local calls are associated on the bill with the number of each originating station line.

Station Hunting

Station lines may be arranged in groups of up to 10, so that calls to a busy line in a group will be completed to any higher numbered line in the group which is not busy. Eight such groups per 100 station lines may be provided. Additional hunting arrangements may be provided within the normal capability of the serving equipment. (C)

Night Answering Service

A key telephone will be provided on the same premises as the attendant positions with facilities to permit the receipt of three simultaneous calls. Such night service may be activated by an appropriate control arrangement at the attendant position.

Attendant Service

Incoming calls to the main listed number are answered by an attendant, who may complete the call to the desired station. An unrestricted station user may dial the attendant over attendant lines to secure help in the completion of an outgoing call.

b. Centrex II Service provides for the following service features in addition to those included in 1.a. above.

Call Transfer - Individual

By operation of the switchhook, a station user may hold an indialed call, dial another station line or the attendant and transfer the incoming call to that party.

Consultation Hold

By operation of the switchhook, a station user may hold an existing indialed call, dial another station line or the attendant for consultation and then return to and complete the original call.

Add-On

By operation of the switchhook, a station user may hold an indialed call, dial another station line, and then, by again operating the switchhook, add the incoming call to the connection for a 3-way conversation.

Trunk Answer From Any Station

When the attendant equipment night service feature is activated, any unrestricted station user at the main location can answer incoming calls indialed to the attendant by dialing a prearranged code. After the incoming call is answered it may be transferred to another station in the same manner as described under Call Transfer-Individual above.

(C) Indicates change.

ISSUED APRIL 22, 1970. EFFECTIVE JUNE 21, 1970.

CANCELLED

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E410
Exhibit 41B

CENTREX SERVICE

A. GENERAL

1. SERVICE FEATURES

a. Centrex I Service provides for the following service features: (C)

Direct Inward Dialing

Incoming calls may be dialed directly to completion to any called station served by the Centrex main or satellite switching equipment without the help of an attendant.

Direct Outward Dialing

Outward calls may be dialed directly to completion from any station served by the Centrex main or satellite switching equipment without the help of an attendant.

Station to Station Calling

Calls may be dialed directly to completion between any two stations of a Centrex System.

Call Transfer - Attendant

An indialed call to a station may be transferred to another station on the same Centrex System with the help of an attendant.

Intercept

Calls dialed to unassigned numbers may be routed to an attendant or to a recorded announcement.

Station Identification

An itemized list of toll calls and the total number of message units for multi-unit local calls are associated on the bill with the number of each originating station line.

Station Hunting

Station lines may be arranged in groups of up to 10, so that calls to a busy line in a group will be completed to any higher numbered line in the group which is not busy. Eight such groups per 100 station lines may be provided.

Night Answering Service

A key telephone will be provided on the same premises as the attendant positions with facilities to permit the receipt of three simultaneous calls. Such night service may be activated by an appropriate control arrangement at the attendant position.

Attendant Service

Incoming calls to the main listed number are answered by an attendant, who may complete the call to the desired station. An unrestricted station user may dial the attendant over attendant lines to secure help in the completion of an outgoing call.

b. Centrex II Service provides for the following service features in addition to those included in 1.a. above. (C)

Call Transfer - Individual

By operation of the switchhook, a station user may hold an indialed call, dial another station line or the attendant and transfer the incoming call to that party.

Consultation Hold

By operation of the switchhook, a station user may hold an existing indialed call, dial another station line or the attendant for consultation and then return to and complete the original call.

Add-On

By operation of the switchhook, a station user may hold an indialed call, dial another station line, and then, by again operating the switchhook, add the incoming call to the connection for a 3-way conversation.

Trunk Answer From Any Station

When the attendant equipment night service feature is activated, any unrestricted station user at the main location can answer incoming calls indialed to the attendant by dialing a prearranged code. After the incoming call is answered it may be transferred to another station in the same manner as described under Call Transfer-Individual above.

(C) Indicates change.

ISSUED JANUARY 9, 1969. EFFECTIVE MARCH 10, 1969.

By J. H. Reiff, Assistant Vice President, One Parkway, Philadelphia, Pa.

CANCELED

E411
Exhibit 41B
Pa.P.U.C.-No. 1.

RATE SHEET NO. 7[illegible] SERIES OF [illegible]

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Section 20
Ninth Revised Sheet 1
Canceling Eighth Revised Sheet 1

* * *

(C)

CENTREX SERVICE

A. GENERAL

1. SERVICE FEATURES

Centrex Service provides for the following service features:

Direct Inward Dialing

Incoming calls may be dialed directly to completion to any called station served by the Centrex main or satellite switching equipment without the help of an attendant.

Direct Outward Dialing

Outward calls may be dialed directly to completion from any station served by the Centrex main or satellite switching equipment without the help of an attendant.

Station to Station Calling

Calls may be dialed directly to completion between any two stations of a Centrex System.

Call Transfer - Attendant

An indialed call to a station may be transferred to another station on the same Centrex System with the help of an attendant.

Intercept

Calls dialed to unassigned numbers may be routed to an attendant or to a recorded announcement.

Station Identification

An itemized list of toll calls and the total number of message units for multi-unit local calls are associated on the bill with the number of each originating station line.

Station Hunting

Station lines may be arranged in groups of up to 10, so that calls to a busy line in a group will be completed to any higher numbered line in the group which is not busy. Eight such groups per 100 station lines may be provided.

Night Answering Service

A key telephone will be provided on the same premises as the attendant positions with facilities to permit the receipt of three simultaneous calls. Such night service may be activated by an appropriate control arrangement at the attendant position.

Attendant Service

Incoming calls to the main listed number are answered by an attendant, who may complete the call to the desired station. An unrestricted station user may dial the attendant over attendant lines to secure help in the completion of an outgoing call.

2. DESCRIPTION

a. CENTREX SYSTEM

A Centrex system consists of dial switching equipment, attendant positions and stations connected by Centrex lines. A system includes only those stations whose inward exchange and toll service is through the customer's main switching location via a single central office code.

The equipment and facilities used in providing the service will be determined by the Telephone Company on an individual case basis and will be based on regular engineering practices and economic considerations. Where the customer specifies equipment or facilities other than those determined by the Telephone Company, additional charges may be applicable.

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May 9 19 69

(C) Indicates change.

ISSUED JUNE 15, 1967.

EFFECTIVE AUGUST 14, 1967.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E412
Exhibit 41B
Pa.P.U.C.-No. 1.

RATE SHEET NO. 232 SERIES OF 69

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Section 20
Fifth Revised Sheet 2
Canceling Fourth Revised Sheet 2

CENTREX SERVICE

A. GENERAL (Cont'd)

2. DESCRIPTION

a. CENTREX SYSTEMS

A Centrex system consists of dial switching equipment, attendant positions and stations connected by Centrex lines. A system includes only those stations whose inward exchange and toll service is through the customer's main switching location via a single central office code.

The equipment, facilities and serving arrangements used in providing the service will be determined by the Telephone Company on an indiyidual case basis and will be based on regular engineering practices and economic considerations. Where the customer specifies equipment, facilities or serving arrangements other than those determined by the Telephone Company, additional charges may be applicable.

b. ATTENDANT POSITIONS

Attendant positions may be switchboards or consoles and are normally located at the main location. These may be arranged for call distribution so that incoming calls will be routed to an unoccupied attendant and for switched loop operation so that the attendant position is released after a call has been established.

c. STATIONS

A main station or station line is the primary or first station or station line assigned a particular station number. A bridged station is a secondary or additional station assigned to the same number as a main station. Both main and bridged stations may be restricted so that they can originate calls only to other stations of the same Centrex system. Stations which can originate calls to the exchange and message toll network are considered as unrestricted stations, even though subject to some restrictions such as access to the network only through an operator, or restriction from access to tie lines or other line groups available to other stations.

d. DIAL SWITCHING EQUIPMENT

The switching equipment with which the customer's attendant positions are directly associated is designated as the main switching equipment. Switching equipment operating through the main switching equipment, which may be established at other customer locations, is designated as satellite switching equipment.

e. CENTREX LINES

Centrex lines include tie lines between switching locations of the same Centrex system or different Centrex systems of the same customer, station lines between the stations and switching locations, attendant lines between attendant positions and switching locations or trunks to provide access to exchange and message toll service. Regulations and rates for such lines are covered in B. and C. following.

f. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (C)

If an educational institution is furnished Centrex Service for its administrative telephones, service may be provided by means of the same Centrex system to students and employees residing at the institution. Such service will be provided only at locations within living quarters which are designated by the institution and are acceptable to the Telephone Company, in buildings or portions thereof which are under the institution's ownership or control.

B. REGULATIONS

1. LINES TERMINATING IN CENTREX EQUIPMENT

In addition to Centrex lines, tie lines, foreign exchange, WATS or other non-Centrex lines suitable for connection to the equipment provided may be terminated in Centrex equipment. Satellite equipment in a different central office district from the main switching equipment may have non-Centrex local trunks for outgoing service connected to the central office serving the district in which the satellite is located.

CANCELED
October 31, 1974

(C) Indicates change.

ISSUED JULY 31, 1969. EFFECTIVE SEPTEMBER 29, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E413
Exhibit 41B

[illegible] SERIES OF [illegible]

CENTREX SERVICE

A. GENERAL (Cont'd)

2. DESCRIPTION (C)

a. CENTREX SYSTEMS

A Centrex system consists of dial switching equipment, attendant positions and stations connected by Centrex lines. A system includes only those stations whose inward exchange and toll service is through the customer's main switching location via a single central office code.

The equipment, facilities and serving arrangements used in providing the service will be determined by the Telephone Company on an individual case basis and will be based on regular engineering practices and economic considerations. Where the customer specifies equipment, facilities or serving arrangements other than those determined by the Telephone Company, additional charges may be applicable. (C) (C)

b. ATTENDANT POSITIONS

Attendant positions may be switchboards or consoles and are normally located at the main location. These may be arranged for call distribution so that incoming calls will be routed to an unoccupied attendant and for switched loop operation so that the attendant position is released after a call has been established.

c. STATIONS

A main station or station line is the primary or first station or station line assigned a particular station number. A bridged station is a secondary or additional station assigned to the same number as a main station. Both main and bridged stations may be restricted so that they can originate calls only to other stations of the same Centrex system. Stations which can originate calls to the exchange and message toll network are considered as unrestricted stations, even though subject to some restrictions such as access to the network only through an operator, or restriction from access to tie lines or other line groups available to other stations.

d. DIAL SWITCHING EQUIPMENT

The switching equipment with which the customer's attendant positions are directly associated is designated as the main switching equipment. Switching equipment operating through the main switching equipment, which may be established at other customer locations, is designated as satellite switching equipment.

e. CENTREX LINES

Centrex lines include tie lines between switching locations of the same Centrex system or different Centrex systems of the same customer, station lines between the stations and switching locations, attendant lines between attendant positions and switching locations or trunks to provide access to exchange and message toll service. Regulations and rates for such lines are covered in B. and C. following.

B. REGULATIONS

1. LINES TERMINATING IN CENTREX EQUIPMENT

In addition to Centrex lines, tie lines, foreign exchange, WATS or other non-Centrex lines suitable for connection to the equipment provided may be terminated in Centrex equipment. Satellite equipment in a different central office district from the main switching equipment may have non-Centrex local trunks for outgoing service connected to the central office serving the district in which the satellite is located.

2. MILEAGE MEASUREMENTS

a. CENTREX LINES

No mileage charges apply to Centrex lines between points within the base rate area of the same central office district within which the customer's main switching equipment is located. Between points in different central office districts the mileage is measured between central office locations which normally provide telephone service at the locations involved, except that where the central office districts are in different exchanges or different zones of a multi-zone exchange and are not contiguous the measurement is between rate centers. If any point is outside the base rate area, zone or locality rate differentials apply in accordance with Local General Tariff Pa.P.U.C.-No. 180A (C)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment, the mileage measurements and charges are the same as those prescribed in the appropriate tariff for the type of channel involved between non-Centrex locations.

CANCELLED

(C) Indicates change.

RATE SHEET NO. 28 SERIES OF 1963

E414
Exhibit 41B

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Third Revised Sheet 2
Canceling Second Revised Sheet 2

CENTREX SERVICE

A. GENERAL (Cont'd)

2. DESCRIPTION (Cont'd)

b. ATTENDANT POSITIONS

Attendant positions may be switchboards or consoles and are normally located at the main location. These may be arranged for call distribution so that incoming calls will be routed to an unoccupied attendant and/or for switched loop operation so that the attendant position is released after a call has been established.

c. STATIONS

A main station or station line is the primary or first station or station line assigned a particular station number. A bridged station is a secondary or additional station assigned to the same number as a main station. Both main and bridged stations may be restricted so that they can originate calls only to other stations of the same Centrex system. Stations which can originate calls to the exchange and message toll network are considered as unrestricted stations, even though subject to some restrictions such as access to the network only through an operator, or restriction from access to tie lines or other line groups available to other stations.

d. DIAL SWITCHING EQUIPMENT

The switching equipment with which the customer's attendant positions are directly associated is designated as the main switching equipment. Switching equipment operating through the main switching equipment, which may be established at other customer locations, is designated as satellite switching equipment.

e. CENTREX LINES

Centrex lines include tie lines between switching locations of the same Centrex system or different Centrex systems of the same customer, station lines between the stations and switching locations, attendant lines between attendant positions and switching locations or trunks to provide access to exchange and message toll service. Regulations and rates for such lines are covered in B. and C. following.

B. REGULATIONS

1. LINES TERMINATING IN CENTREX EQUIPMENT

In addition to Centrex lines, tie lines, foreign exchange, WATS or other non-Centrex lines suitable for connection to the equipment provided may be terminated in Centrex equipment. Satellite equipment in a different central office district from the main switching equipment may have non-Centrex local trunks for outgoing service connected to the central office serving the district in which the satellite is located.

2. MILEAGE MEASUREMENTS

a. CENTREX LINES

No mileage charges apply to Centrex lines between points within the base rate area of the same central office district within which the customer's main switching equipment is located. Between points in different central office districts the mileage is measured between central office locations which normally provide telephone service at the locations involved, except that where the central office districts are in different exchanges or different zones of a multi-zone exchange and are not contiguous the measurement is between rate centers. If any point is outside the base rate area, zone or locality rates apply in accordance with Local General Tariff Pa.P.U.C.-No. 180A. (C)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage measurements and charges are the same as those prescribed in the appropriate tariff for the type of channel involved between non-Centrex locations.

CANCELLED
Mar 9 1969

(C) Indicates change.

ISSUED SEPTEMBER 18, 1968. EFFECTIVE NOVEMBER 17, 1968.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

PREPARED FOR USE OF CO

E415
Exhibit 41B

RATE SHEET NO. 41 SERIES OF 1967

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Second Revised Sheet 2

CENTREX SERVICE

A. GENERAL (Cont'd)

2. DESCRIPTION (Cont'd)

b. ATTENDANT POSITIONS

Attendant positions may be switchboards or consoles and are normally located at the main location. These may be arranged for call distribution so that incoming calls will be routed to an unoccupied attendant and for switched loop operation so that the attendant position is released after a call has been established.

c. STATIONS

A main station or station line is the primary or first station or station line assigned a particular station number. A bridged station is a secondary or additional station assigned to the same number as a main station. Both main and bridged stations may be restricted so that they can originate calls only to other stations of the same Centrex system. Stations which can originate calls to the exchange and message toll network are considered as unrestricted stations, even though subject to some restrictions such as access to the network only through an operator, or restriction from access to tie lines or other line groups available to other stations.

d. DIAL SWITCHING EQUIPMENT

The switching equipment with which the customer's attendant positions are directly associated is designated as the main switching equipment. Switching equipment operating through the main switching equipment, which may be established at other customer locations, is designated as satellite switching equipment.

e. CENTREX LINES

Centrex lines include tie lines between switching locations of the same Centrex system or different Centrex systems of the same customer, station lines between the stations and switching locations, attendant lines between attendant positions and switching locations or trunks to provide access to exchange and message toll service. Regulations and rates for such lines are covered in B. and C. following.

B. REGULATIONS

1. LINES TERMINATING IN CENTREX EQUIPMENT

In addition to Centrex lines, tie lines, foreign exchange, WATS or other non-Centrex lines suitable for connection to the equipment provided may be terminated in Centrex equipment. Satellite equipment in a different central office district from the main switching equipment may have non-Centrex local trunks for outgoing service connected to the central office serving the district in which the satellite is located.

2. MILEAGE MEASUREMENTS

a. CENTREX LINES

No mileage charges apply to Centrex lines between points within the base rate area of the same central office district within which the customer's main switching equipment is located. Between points in different central office districts the mileage is measured between central office locations which normally provide telephone service at the locations involved, except that where the central office districts are in different exchanges or different zones of a multi-zone exchange and are not contiguous the measurement is between rate centers. If any point is outside a base rate, zone rate or locality rate area, exchange line mileage is measured to the nearest point on the base rate, zone rate or locality rate area boundary of the central office district in which it is located.

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage measurements and charges are the same as those prescribed in the appropriate tariff for the type of channel involved between non-Centrex locations.

CANCELED

Nov 17 1968

ISSUED JUNE 15, 1967.

EFFECTIVE AUGUST 14, 1967.

By J. H. Reifi, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E416
PREPARED FOR U Exhibit 41B ONLY

Pa.P.U.C. No. 1.

Section 20
Fifth Revised Sheet 3
Canceling Fourth Revised Sheet 3

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

CENTREX SERVICE

B. REGULATIONS (Cont'd)

2. MILEAGE MEASUREMENTS

a. CENTREX LINES

No mileage charges apply to Centrex lines between points within the base rate area of the
same central office district within which the customer's main switching equipment is lo-
cated. Between points in different central office districts the mileage is measured
between central office locations which normally provide telephone service at the loca-
tions involved, except that where the central office districts are in different exchanges
or different zones of a multi-zone exchange and are not contiguous the measurement is
between rate centers. If any point is outside the base rate area, zone or locality rate
differentials apply in accordance with Local General Tariff Pa.P.U.C.-No. 180A.

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage measurements and
charges are the same as those prescribed in the appropriate tariff for the type of chan-
nel involved between non-Centrex locations.

3. ATTENDANT EQUIPMENT

A minimum of one attendant position is required for Centrex I Service. (C)

4. SWITCHING EQUIPMENT

a. MAIN SWITCHING EQUIPMENT

This is normally placed on the customer's premises but where, in the opinion of the Tele-
phone Company, sufficient space and the proper type and amount of switching equipment can
be made available on Telephone Company premises, it may be located there.

b. SATELLITE SWITCHING EQUIPMENT

Centrex satellite switching equipment in the same central office district as the custom-
er's main location may be provided at the satellite location at the option of the Tele-
phone Company. In another central office district it will be provided if requested by the
customer subject to the charge for a minimum of 25 main stations at the satellite premises
but station identification may not be provided.

c. POWER SUPPLY

All power required in connection with switching equipment or other equipment on the cus-
tomer's premises associated with a Centrex system is provided by the customer, at his
expense, at a voltage of approximately 110 or 220 volts either D.C. or A.C. The customer
extends power-leads to a point designated by the Telephone Company and provides necessary
outlets.

d. SPACE

Sufficient suitable space shall be provided by the customer, at his expense, to place the
required switching and distributing equipment on the customer's premises.

e. SUSPENSION OF SERVICE

Suspension of Centrex Service at the customer's request is not provided.

5. RATINGS OF MESSAGE TOLL AND LOCAL MESSAGE UNIT CALLS

All inward and outward calls, including those terminating or originating at satellites and
handled via the Centrex system, are rated as terminating or originating at the location of
the main switching equipment. However, calls over the non-Centrex foreign exchange or
satellite local trunks covered in B.1. preceding are rated to or from the central offices
to which the trunks are connected. Station identification and billing is not provided under
the Centrex Service offering for calls placed over these trunks.

Identification by tie line groups of toll and multi-unit calls placed over tie lines from
branch exchange systems of the same customer and terminating in the main Centrex switching
equipment will be provided. Calls will be rated as originating at the location of the main
switching equipment of the Centrex system.

6. BRIDGED STATIONS

Bridged stations are provided only on the same premises as the main station to which they
are bridged. Any station bridged to a main station on different premises is classified as
a main station.

(C) Indicates change.

ISSUED SEPTEMBER 1, 1972.

EFFECTIVE NOVEMBER 1, 1972.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E417

PREPARED FOR USE OF COUNSEL Exhibit 41B SHEET NO. 23 SERIES OF 69

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Fourth Revised Sheet 3
Canceling Third Revised Sheet 3

CENTREX SERVICE

B. REGULATIONS (Cont'd)

2. MILEAGE MEASUREMENTS

a. CENTREX LINES

No mileage charges apply to Centrex lines between points within the base rate area of the same central office district within which the customer's main switching equipment is located. Between points in different central office districts the mileage is measured between central office locations which normally provide telephone service at the locations involved, except that where the central office districts are in different exchanges or different zones of a multi-zone exchange and are not contiguous the measurement is between rate centers. If any point is outside the base rate area, zone or locality rate differentials apply in accordance with Local General Tariff Pa.P.U.C.-No. 180A.

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage measurements and charges are the same as those prescribed in the appropriate tariff for the type of channel involved between non-Centrex locations.

3. ATTENDANT EQUIPMENT

A minimum of one attendant position per Centrex system is required.

4. SWITCHING EQUIPMENT

a. MAIN SWITCHING EQUIPMENT

This is normally placed on the customer's premises but where, in the opinion of the Telephone Company, sufficient space and the proper type and amount of switching equipment can be made available on Telephone Company premises, it may be located there.

b. SATELLITE SWITCHING EQUIPMENT

Centrex satellite switching equipment in the same central office district as the customer's main location may be provided at the satellite location at the option of the Telephone Company. In another central office district it will be provided if requested by the customer subject to the charge for a minimum of 25 main stations at the satellite premises but station identification may not be provided.

c. POWER SUPPLY

All power required in connection with switching equipment or other equipment on the customer's premises associated with a Centrex system is provided by the customer, at his expense, at a voltage of approximately 110 or 220 volts either D.C. or A.C. The customer extends power leads to a point designated by the Telephone Company and provides necessary outlets.

d. SPACE

Sufficient suitable space shall be provided by the customer, at his expense, to place the required switching and distributing equipment on the customer's premises.

e. SUSPENSION OF SERVICE

Suspension of Centrex Service at the customer's request is not provided.

5. RATINGS OF MESSAGE TOLL AND LOCAL MESSAGE UNIT CALLS

All inward and outward calls, including those terminating or originating at satellites and handled via the Centrex system, are rated as terminating or originating at the location of the main switching equipment. However, calls over the non-Centrex foreign exchange or satellite local trunks covered in B.1. preceding are rated to or from the central offices to which the trunks are connected. Station identification and billing is not provided under the Centrex Service offering for calls placed over these trunks.

Identification by tie line groups of toll and multi-unit calls placed over tie lines from branch exchange systems of the same customer and terminating in the main Centrex switching equipment will be provided. Calls will be rated as originating at the location of the main switching equipment of the Centrex system.

6. BRIDGED STATIONS

Bridged stations are provided only on the same premises as the main station to which they are bridged. Any station bridged to a main station on different premises is classified as a main station.

ISSUED JULY 31, 1969.

EFFECTIVE SEPTEMBER 29, 1969.

CANCELED

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E418

PREPARED FOR USE OF COU **Exhibit 41B**

Pa.P.U.C.-No. 1.

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Section 20
Third Revised Sheet 3
Canceling Second Revised Sheet 3

CENTREX SERVICE

B. REGULATIONS (Cont'd) (C)

3. ATTENDANT EQUIPMENT

A minimum of one attendant position per Centrex system is required.

4. SWITCHING EQUIPMENT

a. MAIN SWITCHING EQUIPMENT

This is normally placed on the customer's premises but where, in the opinion of the Telephone Company, sufficient space and the proper type and amount of switching equipment can be made available on Telephone Company premises, it may be located there.

b. SATELLITE SWITCHING EQUIPMENT

Centrex satellite switching equipment in the same central office district as the customer's main location may be provided at the satellite location at the option of the Telephone Company. In another central office district it will be provided if requested by the customer subject to the charge for a minimum of 25 main stations at the satellite premises but station identification may not be provided. (C)

c. POWER SUPPLY

All power required in connection with switching equipment or other equipment on the customer's premises associated with a Centrex system is provided by the customer, at his expense, at a voltage of approximately 110 or 220 volts either D.C. or A.C. The customer extends power leads to a point designated by the Telephone Company and provides necessary outlets.

d. SPACE

Sufficient suitable space shall be provided by the customer, at his expense, to place the required switching and distributing equipment on the customer's premises.

e. SUSPENSION OF SERVICE

Suspension of Centrex Service at the customer's request is not provided.

5. RATINGS OF MESSAGE TOLL AND LOCAL MESSAGE UNIT CALLS

All inward and outward calls, including those terminating or originating at satellites and handled via the Centrex system, are rated as terminating or originating at the location of the main switching equipment. However, calls over the non-Centrex foreign exchange or satellite local trunks covered in B.1. preceding are rated to or from the central offices to which the trunks are connected. Station identification and billing is not provided under the Centrex Service offering for calls placed over these trunks. (C)

Identification by tie line groups of toll and multi-unit calls placed over tie lines from branch exchange systems of the same customer and terminating in the main Centrex switching equipment will be provided. Calls will be rated as originating at the location of the main switching equipment of the Centrex system.

6. BRIDGED STATIONS

Bridged stations are provided only on the same premises as the main station to which they are bridged. Any station bridged to a main station on different premises is classified as a main station. (C)

7. MINIMUM CONTRACT PERIOD; TERMINATION CHARGES

Centrex attendant equipment, tie line terminals, and unrestricted main stations are furnished under a five year minimum contract period. Service furnished from each switching location is treated as a separate system in computing termination charges. Termination charges are not applied until a system is disconnected or moved, except in the case of attendant positions in excess of the number recommended by the Telephone Company, as to which see C.4.c. following.

Termination charges will be computed on the basis of the highest number of attendant positions, tie line terminals, and unrestricted main stations, respectively, in service during the last five years of a system. No termination charge is applied to attendant positions, tie line terminals, or unrestricted main stations in excess of such highest number which were in service for less than five years and disconnected prior to the five year period preceding the disconnection or move of a system.

An annual review of the January billing of each system will be made and the number of respective units in service for that billing will be considered to have been in service for one year. A full year of service life will be credited for any period of service preceding the first January billing date for any given unit. No service life will be credited for the portion of a year that may elapse following the January billing date and prior to the date of disconnection or move.

In the event that a Centrex system is disconnected or moved within the minimum contract period for any given unit, the established charges for the period of service apply plus an amount for unrestricted main stations equal to 35%, and for attendant positions and tie line terminals equal to 50%, of the charges for the remainder of the minimum contract period at the rate in effect at the time the system is disconnected or moved.

CANCELED

(C) Indicates change.

EFFECTIVE MARCH 10, 1969.

ISSUED JANUARY 9, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E419
Exhibit 41B
PREPARED FOR USE OF COUNSEL ONLY RATE SHEET NO. 43 SERIES OF 110

THE BELL TELEPHONE .
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Second Revised Sheet 3

CENTREX SERVICE

B. REGULATIONS (Cont'd)

3. SWITCHING EQUIPMENT

a. MAIN SWITCHING EQUIPMENT

This is normally placed on the customer's premises but where, in the opinion of the Telephone Company, sufficient space and the proper type and amount of switching equipment can be made available on Telephone Company premises, it may be located there.

b. SATELLITE SWITCHING EQUIPMENT

Centrex satellite switching equipment in the same central office district as the customer's main location may be provided at the satellite location at the option of the Telephone Company. In another central office district it will be provided if requested by the customer subject to the charge for a minimum of 25 main stations at the satellite premises but station identification may not be provided.

4. RATINGS OF MESSAGE TOLL AND LOCAL MESSAGE UNIT CALLS

All inward and outward calls, including those terminating or originating at satellites and handled via the Centrex system, are rated as terminating or originating at the location of the main switching equipment. However, calls over the non-Centrex foreign exchange or satellite local trunks covered in B.1. preceding are rated to or from the central offices to which the trunks are connected. Station identification and billing is not provided for calls placed over non-Centrex lines.

5. BRIDGED STATIONS

Bridged stations are provided only on the same premises as the main station to which they are bridged. Any station bridged to a main station on different premises is classified as a main station.

6. MINIMUM CONTRACT PERIOD; TERMINATION CHARGES

Centrex attendant equipment, tie line terminals, and unrestricted main stations are furnished under a five year minimum contract period. Service furnished from each switching location is treated as a separate system in computing termination charges. Termination charges are not applied until a system is disconnected or moved, except in the case of attendant positions in excess of the number recommended by the Telephone Company, as to which see C.4.c. following.

Termination charges will be computed on the basis of the highest number of attendant positions, tie line terminals, and unrestricted main stations, respectively, in service during the last five years of a system. No termination charge is applied to attendant positions, tie line terminals, or unrestricted main stations in excess of such highest number which were in service for less than five years and disconnected prior to the five year period preceding the disconnection or move of a system.

An annual review of the January billing of each system will be made and the number of respective units in service for that billing will be considered to have been in service for one year. A full year of service life will be credited for any period of service preceding the first January billing date for any given unit. No service life will be credited for the portion of a year that may elapse following the January billing date and prior to the date of disconnection or move.

In the event that a Centrex system is disconnected or moved within the minimum contract period for any given unit, the established charges for the period of service apply plus an amount for unrestricted main stations equal to 35%, and for attendant positions and tie line terminals equal to 50%, of the charges for the remainder of the minimum contract period at the rate in effect at the time the system is disconnected or moved.

CANCELLED
May 9 1968

ISSUED JUNE 15, 1967. EFFECTIVE AUGUST 14, 1967.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E420

Exhibit 41B

B. REGULATIONS (Cont'd)

PREPARED FOR USE OF COUNSEL ONLY

7. MINIMUM CONTRACT PERIOD; TERMINATION CHARGES

Except as covered in Custom Centrex Service, Paragraph D, the following regulations apply. (C)

Centrex attendant equipment, tie line terminals, and unrestricted main stations are furnished under a five year minimum contract period. Service furnished from each switching location is treated as a separate system in computing termination charges. Termination charges are not applied until a system is disconnected or moved, except in the case of attendant positions in excess of the number recommended by the Telephone Company, as to which see C.4.c. following.

Termination charges will be computed on the basis of the highest number of attendant positions, tie line terminals, and unrestricted main stations, respectively, in service during the last five years of a system. No termination charge is applied to attendant positions, tie line terminals, or unrestricted main stations in excess of such highest number which were in service for less than five years and disconnected prior to the five year period preceding the disconnection or move of a system.

An annual review of the January billing of each system will be made and the number of respective units in service for that billing will be considered to have been in service for one year. A full year of service life will be credited for any period of service preceding the first January billing date for any given unit. No service life will be credited for the portion of a year that may elapse following the January billing date and prior to the date of disconnection or move.

In the event that a Centrex system is disconnected or moved within the minimum contract period for any given unit, the established charges for the period of service apply plus an amount for unrestricted main stations equal to 33%, and for attendant positions and tie line terminals equal to 50%, of the charges for the remainder of the minimum contract period at the rate in effect at the time the system is disconnected or moved.

8. OPERATING

All attendant operating is performed at the expense of the customer and in conformity with the rules and regulations established by the Telephone Company to maintain a proper standard of service.

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS

a. In the case of Centrex service provided to students and employees of an educational institution within living quarters of the institution, such students and/or employees in each such living quarters shall be jointly and severally liable to the Telephone Company for all toll and message unit usage charges chargeable to the telephone number or numbers assigned to such living quarters. Billing for such charges may be by apartment or room number, or other convenient means, rather than by name. The educational institution shall be liable to the Telephone Company for all other charges for such Centrex service. Such Centrex service for students and employees residing at an educational institution will be provided only after the establishment with the educational institution, students, and employees of billing collection procedures satisfactory to the Telephone Company.

b. The educational institution will obtain from each individual residing in living quarters designated to receive such Centrex service a signed written undertaking, satisfactory to the Telephone Company, to the effect that such individual will be liable for charges for toll and bulk message units in connection with such service as hereinabove provided. In the event of failure to obtain such an undertaking, the institution, in addition to the individual resident, shall be liable to the Telephone Company for such charges. In billing such charges, the Telephone Company may rely upon information furnished by the institution as to the names and addresses of the residents of any such living quarters.

c. A student Centrex station may be located only in residential quarters. Such a station may not be located in an entryway, common hallway, activity room, club room, dining hall, classroom, laboratory, or other similar location, nor may it be used as the main or house telephone service of a dormitory or fraternity house.

d. The educational institution may charge individuals provided with student Centrex service in amounts not exceeding the monthly and non-recurring charges specified in Paragraph C.8. hereof.

e. Bridged stations may be located only in the same living quarters as the main student Centrex station.

(C) Indicates change.

CANCELED

Mar-1, 2 74

CENTREX SERVICE

B. REGULATIONS (Cont'd)

7. MINIMUM CONTRACT PERIOD; TERMINATION CHARGES

Centrex attendant equipment, tie line terminals, and unrestricted main stations are furnished under a five year minimum contract period. Service furnished from each switching location is treated as a separate system in computing termination charges. Termination charges are not applied until a system is disconnected or moved, except in the case of attendant positions in excess of the number recommended by the Telephone Company, as to which see C.4.c. following.

Termination charges will be computed on the basis of the highest number of attendant positions, tie line terminals, and unrestricted main stations, respectively, in service during the last five years of a system. No termination charge is applied to attendant positions, tie line terminals, or unrestricted main stations in excess of such highest number which were in service for less than five years and disconnected prior to the five year period preceding the disconnection or move of a system.

An annual review of the January billing of each system will be made and the number of respective units in service for that billing will be considered to have been in service for one year. A full year of service life will be credited for any period of service preceding the first January billing date for any given unit. No service life will be credited for the portion of a year that may elapse following the January billing date and prior to the date of disconnection or move.

In the event that a Centrex system is disconnected or moved within the minimum contract period for any given unit, the established charges for the period of service apply plus an amount for unrestricted main stations equal to 35%, and for attendant positions and tie line terminals equal to 50%, of the charges for the remainder of the minimum contract period at the rate in effect at the time the system is disconnected or moved.

8. OPERATING

All attendant operating is performed at the expense of the customer and in conformity with the rules and regulations established by the Telephone Company to maintain a proper standard of service.

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (C)

a. In the case of Centrex service provided to students and employees of an educational institution within living quarters of the institution, such students and/or employees in each such living quarters shall be jointly and severally liable to the Telephone Company for all toll and message unit usage charges chargeable to the telephone number or numbers assigned to such living quarters. Billing for such charges may be by apartment or room number, or other convenient means, rather than by name. The educational institution shall be liable to the Telephone Company for all other charges for such Centrex service. Such Centrex service for students and employees residing at an educational institution will be provided only after the establishment with the educational institution, students, and employees of billing collection procedures satisfactory to the Telephone Company.

b. The educational institution will obtain from each individual residing in living quarters designated to receive such Centrex service a signed written undertaking, satisfactory to the Telephone Company, to the effect that such individual will be liable for charges for toll and bulk message units in connection with such service as hereinabove provided. In the event of failure to obtain such an undertaking, the institution, in addition to the individual resident, shall be liable to the Telephone Company for such charges. In billing such charges, the Telephone Company may rely upon information furnished by the institution as to the names and addresses of the residents of any such living quarters.

c. A student Centrex station may be located only in residential quarters. Such a station may not be located in an entryway, common hallway, activity room, club room, dining hall, classroom, laboratory, or other similar location, nor may it be used as the main or house telephone service of a dormitory or fraternity house.

d. The educational institution may charge individuals provided with student Centrex service in amounts not exceeding the monthly and non-recurring charges specified in Paragraph C.8. hereof.

e. Bridged stations may be located only in the same living quarters as the main student Centrex station.

(C) Indicates change.

ISSUED JULY 31, 1969.

EFFECTIVE SEPTEMBER 29, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

CANCELED

PREPARED FOR USE

E422
Exhibit 41B

RATE SHEET NO. 11 SERIES OF 1969

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Eighth Revised Sheet 4
Canceling Seventh Revised Sheet 4

CENTREX SERVICE

B. REGULATIONS (Cont'd)

8. OPERATING

All attendant operating is performed at the expense of the customer and in conformity with the rules and regulations established by the Telephone Company to maintain a proper standard of service.

9. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation.

10. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule 1) is $8.45 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $8.45. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule 11) is offered.

(a) The following schedule applies at the main location of the Centrex System. (C)

	MONTHLY RATES CENTREX I SCHEDULE		
	A	B	C
Per unrestricted main station line:			
First 50	$10.50	$11.00	$9.75
Next 50	10.00	10.50	8.75
Next 200	7.00	7.50	5.75
Next 600	6.00	6.50	5.75
Over 900	4.25	4.50	4.00

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	A	B	C
Per unrestricted main station line:			
First 50) At	8.50	9.00	7.75
Next 250) each	8.00	8.50	6.75
Next 600) Premises	6.00	6.50	5.73
Over 900)	4.25	4.50	4.00

(c) For Schedule C.1.a.(1) (a) and (b) above:

	A	B	C
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises	.30	.35	.40
Per Restricted Main Station or Station Line	3.50	3.50	3.50
Per Bridged Station of:			
Unrestricted Main Station or Station Line	3.75	3.75	3.10
Restricted Main Station or Station Line	3.25	3.25	3.25

CANCELED

(C) Indicates change.

ISSUED MAY 14, 1969. EFFECTIVE JULY 13, 1969.

September 28 1969

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E423
Exhibit 41B

PREPARED FOR U

CENTREX SERVICE

B. REGULATIONS (Cont'd)

(C)

8. OPERATING

All attendant operating is performed at the expense of the customer and in conformity with the rules and regulations established by the Telephone Company to maintain a proper standard of service.

(C)

9. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation.

(C)

10. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $3.45 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $8.45. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered. (C)

	CENTREX I SCHEDULE			
	A	B	C	(C)
Per Unrestricted Main Station or Station Line:				
First 50) At	$8.50	$9.00	$7.75	
Next 250) each	8.00	8.50	6.75	
Next 600) Premises	6.00	6.50	5.75	
Over 900)	4.25	4.50	4.00	
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises	.30	.35	.40	
Per Restricted Main Station or Station Line	3.50	3.50	3.50	
Per Bridged Station of:				
Unrestricted Main Station or Station Line	3.75	3.75	3.40	
Restricted Main Station or Station Line	3.25	3.25	3.25	

(2) The following monthly rates apply for Centrex II Service in addition to those covered in C.1.a. (1) above: (C)

Per unrestricted Main Station or Station Line	$1.50
Per Bridged Station of Unrestricted Main Station or Station Line.	.50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

CANCELED
July 12 1969

(C) Indicates change.

ISSUED JANUARY 9, 1969.

EFFECTIVE MARCH 10, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

PREPARED FOR USE

E424
Exhibit 41B

RATE SHEET NO. 41 SERIES OF 1967

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Sixth Revised Sheet 4

CENTREX SERVICE

B. REGULATIONS (Cont'd)

7. OPERATING

All attendant operating is performed at the expense of the customer and in conformity with the rules and regulations established by the Telephone Company to maintain a proper standard of service.

8. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation.

9. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable sections of this tariff and other tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

Centrex Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $8.45 per month or less. Centrex Schedule B Rates apply in exchanges where the tariff charge for such service is more than $8.45. Centrex Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered.

	CENTREX SCHEDULE		
	A	B	C
Per Unrestricted Main Station or Station Line:			
First 50) At	$8.50	$9.00	$7.75
Next 250) each	8.00	8.50	6.75
Next 600) Premises	6.00	6.50	5.75
Over 900)	4.25	4.50	4.00
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises	.30	.35	.40
Per Restricted Main Station or Station Line	3.50	3.50	3.50
Per Bridged Station of:			
Unrestricted Main Station or Station Line	3.75	3.75	3.40
Restricted Main Station or Station Line	3.25	3.25	3.25

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

CANCELLED
May 9 1969

ISSUED JUNE 15, 1967. EFFECTIVE AUGUST 14, 1967.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E425
Exhibit 41
Pa.P.U.C.-No. 1.

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(2) The following monthly rates apply for Centrex II Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above. (C)

Per unrestricted Main Station or Station Line......................	$1.50
Per Bridged Station of Unrestricted Main, Station or Station Line.	.50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

CANCELED

(C) Indicates change.

ISSUED MAY 14, 1969. EFFECTIVE JULY 19, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E426

Exhibit 41B SERIES OF 1972

Pa.P.U.C.-No. 1.

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Section 20
Ninth Revised Sheet 5
Canceling Eighth Revised Sheet 5

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

B. REGULATIONS (Cont'd)

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd)

f. Student Centrex stations will not be included as part of the minimum unrestricted main station total required in computing the minimum monthly charge of the institution's administrative Centrex. In addition, student Centrex stations are not counted as part of a premises main station count.

g. An employee of the institution who otherwise qualifies under the terms and conditions of this Tariff may be provided Centrex service on the same basis as a student.

h. Access from a student Centrex station is permitted only to the Centrex system serving the student Centrex station and the regular local exchange and message toll networks.

i. Student Centrex service may be restricted from outward or both inward and outward access to the exchange or toll network or may be disconnected, at the option of the Telephone Company, in the event of non-payment of charges due or any other violation of the rules and regulations under which service is furnished.

j. The telephone number assigned to a student Centrex station will remain the same as long as the station remains in the same living quarters, unless the Telephone Company elects to change the number.

10. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation or a joint user.

11. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $9.60 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $9.60. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered.

(a) The following schedule applies at the main location including connected premises to the main location of the Centrex System.

	Monthly Rates				
	Intercommunication Charge	Exchange Access Charge Centrex I Schedule			
Per Unrestricted Main Station or Station Line:	(Plus Sched. A, B or C) (Exch. Acc. Chg.)	A	B	C	
First 100	$8.35	$2.80	$3.35	$1.75	(C)
Next 200	5.50	2.15	2.70	.80	
Next 600	5.50	1.05	1.60	.80	
Over 900	4.20	.45	.70	.15	

(C) Indicates change.

ISSUED SEPTEMBER 1, 1972.

EFFECTIVE for billing periods
beginning on or after
November 1, 1972.

CANCELED

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E427
Exhibit 41B

SHEET NO. 31 SERIES OF 1971

PREPARED FOR USE OF COUNSEL ONLY

B. REGULATIONS (Cont'd)

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd)

f. Student Centrex stations will not be included as part of the minimum unrestricted main station total required in computing the minimum monthly charge of the institution's administrative Centrex. In addition, student Centrex stations are not counted as part of a premises main station count.

g. An employee of the institution who otherwise qualifies under the terms and conditions of this Tariff may be provided Centrex service on the same basis as a student.

h. Access from a student Centrex station is permitted only to the Centrex system serving the student Centrex station and the regular local exchange and message toll networks.

i. Student Centrex service may be restricted from outward or both inward and outward access to the exchange or toll network or may be disconnected, at the option of the Telephone Company, in the event of non-payment of charges due or any other violation of the rules and regulations under which service is furnished.

j. The telephone number assigned to a student Centrex station will remain the same as long as the station remains in the same living quarters, unless the Telephone Company elects to change the number.

10. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation or a joint user.

11. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $9.60 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $9.60. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered. (C) (C)

(a) The following schedule applies at the main location including connected premises to the main location of the Centrex System.

	Monthly Rates				
	Intercommunication Charge	Exchange Access Charge Centrex I Schedule			
Per Unrestricted Main Station or Station Line:	(Plus Sched. A, B or C) (Exch. Acc. Chg.)	A	B	C	
First 50	$10.15	$3.40	$4.00	$2.70	(C)(I)
Next 50	6.60	2.15	2.70	.80	(D)
Next 200	5.50	2.15	2.70	.80	(I)
Next 600	5.50	1.05	1.60	.80	
Over 900	4.20(I)	.45(I)	.70(I)	.15	

(C) Indicates change. (I) Indicates increase. (D) Indicates decrease.

ISSUED DECEMBER 29, 1971.

EFFECTIVE DECEMBER 14, 1971.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

In compliance with order of the Pennsylvania Public Utility Commission of December 14, 1971 in C. 19132.

E428
Exhibit 41B

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

B. REGULATIONS (Cont'd)

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd)

f. Student Centrex stations will not be included as part of the minimum unrestricted main station total required in computing the minimum monthly charge of the institution's administrative Centrex. In addition, student Centrex stations are not counted as part of a premises main station count.

g. An employee of the institution who otherwise qualifies under the terms and conditions of this Tariff may be provided Centrex service on the same basis as a student.

h. Access from a student Centrex station is permitted only to the Centrex system serving the student Centrex station and the regular local exchange and message toll networks.

i. Student Centrex service may be restricted from outward or both inward and outward access to the exchange or toll network or may be disconnected, at the option of the Telephone Company, in the event of non-payment of charges due or any other violation of the rules and regulations under which service is furnished.

j. The telephone number assigned to a student Centrex station will remain the same as long as the station remains in the same living quarters, unless the Telephone Company elects to change the number.

10. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation or a joint user.

11. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $8.45 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $8.45. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered.

(a) The following schedule applies at the main location including connected premises to the main location of the Centrex System.

	Monthly Rates				
	Intercommunication Charge	Exchange Access Charge Centrex I Schedule			(C)
Per Unrestricted Main Station or Station Line:	(Plus Sched. A, B or C) (Exch. Acc. Chg.)				(C)
		A	B	C	
First 50	$7.75	$2.75	$3.25	$2.00	
Next 50	7.75	2.25	2.75	1.00	
Next 200	5.05	1.95	2.45	.70	
Next 600	5.05	.95	1.45	.70	
Over 900	3.85	.40	.65	.15	

(C) Indicates change.

ISSUED NOVEMBER 3, 1971.

EFFECTIVE for billing periods
beginning on or after
November 4, 1971.

By J. H. Neff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

Issued under Special Permission of the Pennsylvania Public Utility Commission, No. 27[illegible]7 of October 18, 1971.

CANCELED

30 SERIES OF 1970

PREPARED FOR USE OF COUNSEL ONLY

E429
Exhibit 41B
Pa.P.U.C.-No. 1.

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Section 20
Sixth Revised Sheet 5
Canceling Fifth Revised Sheet 5

CENTREX SERVICE

B. REGULATIONS (Cont'd)

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd)

f. Student Centrex stations will not be included as part of the minimum unrestricted main station total required in computing the minimum monthly charge of the institution's administrative Centrex. In addition, student Centrex stations are not counted as part of a premises main station count.

g. An employee of the institution who otherwise qualifies under the terms and conditions of this Tariff may be provided Centrex service on the same basis as a student.

h. Access from a student Centrex station is permitted only to the Centrex system serving the student Centrex station and the regular local exchange and message toll networks.

i. Student Centrex service may be restricted from outward or both inward and outward access to the exchange or toll network or may be disconnected, at the option of the Telephone Company, in the event of non-payment of charges due or any other violation of the rules and regulations under which service is furnished.

j. The telephone number assigned to a student Centrex station will remain the same as long as the station remains in the same living quarters unless the Telephone Company elects to change the number.

10. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation or a joint user.

11. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $10.85 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $10.85. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered. (C) (C)

(a) The following schedule applies at the main location including connected premises to the main location of the Centrex System.

	MONTHLY RATES CENTREX I SCHEDULE A	 B	 C	
Per unrestricted main station line:				
First 50	$11.55	$12.10	$10.75	(C)(I)
Next 50	11.00	11.55	9.65	│ │
Next 200	7.70	8.25	6.35	│ │
Next 600	6.60	7.15	6.35	│ │
Over 900	4.70	4.95	4.40	│ │

Not Effective [illegible]
By Cancellation [illegible] 12-[illegible]

(C) Indicates change. (I) Indicates increase.

ISSUED DECEMBER 3, 1970.

EFFECTIVE FEBRUARY 3, 1971.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E430
Exhibit 41B

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

[illegible] 77 70
Section 20
Fifth Revised Sheet 5
Canceling Fourth Revised Sheet 5

CENTREX SERVICE

B. REGULATIONS (Cont'd)

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd)

f. Student Centrex stations will not be included as part of the minimum unrestricted main station total required in computing the minimum monthly charge of the institution's administrative Centrex. In addition, student Centrex stations are not counted as part of a premises main station count.

g. An employee of the institution who otherwise qualifies under the terms and conditions of this Tariff may be provided Centrex service on the same basis as a student.

h. Access from a student Centrex station is permitted only to the Centrex system serving the student Centrex station and the regular local exchange and message toll networks.

i. Student Centrex service may be restricted from outward or both inward and outward access to the exchange or toll network or may be disconnected, at the option of the Telephone Company, in the event of non-payment of charges due or any other violation of the rules and regulations under which service is furnished.

j. The telephone number assigned to a student Centrex station will remain the same as long as the station remains in the same living quarters, unless the Telephone Company elects to change the number.

10. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation or a joint user. (C)

11. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $8.45 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $8.45. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered.

(a) The following schedule applies at the main location including connected premises to the main location of the Centrex System.

	MONTHLY RATES CENTREX I SCHEDULE A	B	C
Per unrestricted main station line:			
First 50	$10.50	$11.00	$9.75
Next 50	10.00	10.50	8.75
Next 200	7.00	7.50	5.75
Next 600	6.00	6.50	5.75
Over 900	4.25	4.50	4.00

CANCELED

June 3, 19 71

(C) Indicates change.

ISSUED AUGUST 17, 1970. EFFECTIVE OCTOBER 16, 1970.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

APPROVED FOR USE

E431

Exhibit 41B

RATE SHEET NO. 7 SERIES OF 1970

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Fourth Revised Sheet 5
Canceling Third Revised Sheet 5

CENTREX SERVICE

B. REGULATIONS (Cont'd)

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd)

f. Student Centrex stations will not be included as part of the minimum unrestricted main station total required in computing the minimum monthly charge of the institution's administrative Centrex. In addition, student Centrex stations are not counted as part of a premises main station count.

g. An employee of the institution who otherwise qualifies under the terms and conditions of this Tariff may be provided Centrex service on the same basis as a student.

h. Access from a student Centrex station is permitted only to the Centrex system serving the student Centrex station and the regular local exchange and message toll networks.

i. Student Centrex service may be restricted from outward or both inward and outward access to the exchange or toll network or may be disconnected, at the option of the Telephone Company, in the event of non-payment of charges due or any other violation of the rules and regulations under which service is furnished.

j. The telephone number assigned to a student Centrex station will remain the same as long as the station remains in the same living quarters, unless the Telephone Company elects to change the number.

10. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation.

11. OTHER SERVICES

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $8.45 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $8.45. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered.

(a) The following schedule applies at the main location including connected premises to the main location of the Centrex System. (C)

	MONTHLY RATES CENTREX I SCHEDULE A	 B	 C
Per unrestricted main station line:			
First 50	$10.50	$11.00	$9.75
Next 50	10.00	10.50	8.75
Next 200	7.00	7.50	5.75
Next 600	6.00	6.50	5.75
Over 900	4.25	4.50	4.00

CANCELED

October 15 1970

(C) Indicates change.

ISSUED APRIL 22, 1970.

EFFECTIVE JUNE 21, 1970.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E432
Exhibit 41B

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

B. REGULATIONS (Cont'd)

9. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd) (C)

f. Student Centrex stations will not be included as part of the minimum unrestricted main station total required in computing the minimum monthly charge of the institution's administrative Centrex. In addition, student Centrex stations are not counted as part of a premises main station count.

g. An employee of the institution who otherwise qualifies under the terms and conditions of this Tariff may be provided Centrex service on the same basis as a student.

h. Access from a student Centrex station is permitted only to the Centrex system serving the student Centrex station and the regular local exchange and message toll networks.

i. Student Centrex service may be restricted from outward or both inward and outward access to the exchange or toll network or may be disconnected, at the option of the Telephone Company, in the event of non-payment of charges due or any other violation of the rules and regulations under which service is furnished.

j. The telephone number assigned to a student Centrex station will remain the same as long as the station remains in the same living quarters, unless the Telephone Company elects to change the number.

10. PERMISSIBLE INTERCONNECTIONS

Station lines and tie lines connected with a Centrex system confined to one premises or extending to another premises of the same customer may be connected for exchange service, interconnected with each other, or interconnected with station lines and tie lines extending to the premises of another customer. Station lines and tie lines connected with a Centrex system and extending to the premises of another customer may not be connected for exchange service. Calls over such lines also may not be connected to other station or tie lines which extend to the premises of another customer.

The term "premises of the same customer" includes premises occupied by an agent or representative of the customer or a controlled or controlling partnership or corporation.

11. OTHER SERVICES (C)

Other equipment and services requested by Centrex customers and compatible with this service will be furnished in accordance with regulations and at the rates specified in the applicable Sections of this Tariff and other Tariffs of the Telephone Company.

C. RATES

1. STATIONS

a. MONTHLY RATES

(1) Centrex I Schedule A Rates apply in exchanges where the tariff charge for Individual Line Business Flat Rate Service (Schedule I) is $8.45 per month or less. Centrex I Schedule B Rates apply in exchanges where the tariff charge for such service is more than $8.45. Centrex I Schedule C Rates apply in exchanges where Business Message Rate Service (Schedule II) is offered.

(a) The following schedule applies at the main location of the Centrex System.

	MONTHLY RATES CENTREX I SCHEDULE		
	A	B	C
Per unrestricted main station line:			
First 50	$10.50	$11.00	$9.75
Next 50	10.00	10.50	8.75
Next 200	7.00	7.50	5.75
Next 600	6.00	6.50	5.75
Over 900	4.25	4.50	4.00

(C) Indicates change.

ISSUED JULY 31, 1969. EFFECTIVE SEPTEMBER [illegible] 1969.

CANCELED

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

PREPARED 20.

RATE SHEET NO. 11 SERIES OF 69

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

E433
Exhibit 41B
Pa.P.U.C.-No. 1.

Section 20
Second Revised Sheet 5
Canceling First Revised Sheet 5

CENTREX SERVICE

C. RATES (Cont'd)

1. STATIONS (Cont'd)

b. APPLICATION OF RATES (Cont'd)

(4) A minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum. (C)

(5) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(6) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(7) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(8) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations. (C)

2. TRUNKS FOR ACCESS TO EXCHANGE AND MESSAGE TOLL SERVICE

a. CENTREX TRUNKS

Trunks from locations within the same central office district as the main switching equipment are included in the station charges in 1. preceding.

b. NON-CENTREX TRUNKS

Trunks for outgoing service from a Centrex satellite through the local serving central office are provided at the rates specified for private branch exchange trunks in Section 17 of this Tariff.

3. DIAL SWITCHING EQUIPMENT

a. CENTREX SWITCHING EQUIPMENT

Both Centrex main and satellite switching equipment to provide standard grade service are included in the station charges in 1. preceding.

4. ATTENDANT EQUIPMENT

	Installation Charge	Monthly Rate
a. Centrex Consoles or Cord Switchboards		
First position installed at any one time	$1,000.00	$175.00
Each additional position installed at the same time as a first position	500.00	175.00

b. One hundred route feet of cable to the attendant equipment from the cable frame on the same premises is included in the above charges. Additional cable is subject to charges based on costs.

c. Only the number of attendant positions recommended by the Telephone Company will be accorded the termination charge treatment specified in B.7. preceding. Positions in excess of the number recommended by the Telephone Company will be subject to termination charges at the time of disconnection or move of the position within the specified five year minimum contract period.

d. Where a customer with cord switchboards, other than Universal Desk Type, changes to Centrex service and wishes to continue the use of one or more of the existing switchboards, he may do so at the tariff rates for said switchboards, provided said switchboard(s) are of a type which can be made suitable for Centrex operation by minor modification. The customer pays the cost of labor for such modification.

Where a customer with Universal Desk Type cord switchboards changes to Centrex Service and wishes to continue the use of one or more of the existing switchboards, he may do so at the monthly rates for attendant equipment included in C.4.a. above.

The customer enters into a new five year contract for any cord switchboard(s) retained and pays termination charges, if applicable, on any cord switchboard(s) not retained when he changes to Centrex Service.

CANCELED

(C) Indicates change.

ISSUED MAY 14, 1969. EFFECTIVE JULY 13, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E434
Exhibit 41B

CENTREX SERVICE

C. RATES (Cont'd)

1. STATIONS (Cont'd)

b. APPLICATION OF RATES (Cont'd)

(4) A minimum monthly charge for 300 Centrex unrestricted main stations served directly from the main switching equipment applies. Charges for restricted stations are not included in the minimum. (C)

(5) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(6) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(7) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(8) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 300 Centrex II unrestricted main stations. (C)

2. TRUNKS FOR ACCESS TO EXCHANGE AND MESSAGE TOLL SERVICE

a. CENTREX TRUNKS

Trunks from locations within the same central office district as the main switching equipment are included in the station charges in 1. preceding.

b. NON-CENTREX TRUNKS

Trunks for outgoing service from a Centrex satellite through the local serving central office are provided at the rates specified for private branch exchange trunks in Section 17 of this Tariff.

3. DIAL SWITCHING EQUIPMENT

a. CENTREX SWITCHING EQUIPMENT

Both Centrex main and satellite switching equipment to provide standard grade service are included in the station charges in 1. preceding.

4. ATTENDANT EQUIPMENT

	Installation Charge	Monthly Rate
a. Centrex Consoles or Cord Switchboards		
First position installed at any one time	$1,000.00	$175.00
Each additional position installed at the same time as a first position	500.00	175.00

b. One hundred route feet of cable to the attendant equipment from the cable frame on the same premises is included in the above charges. Additional cable is subject to charges based on costs.

c. Only the number of attendant positions recommended by the Telephone Company will be accorded the termination charge treatment specified in B.7. preceding. Positions in excess of the number recommended by the Telephone Company will be subject to termination charges at the time of disconnection or move of the position within the specified five year minimum contract period. (C)

d. Where a customer with cord switchboards, other than Universal Desk Type, changes to Centrex service and wishes to continue the use of one or more of the existing switchboards, he may do so at the tariff rates for said switchboards, provided said switchboard(s) are of a type which can be made suitable for Centrex operation by minor modification. The customer pays the cost of labor for such modification. (C)

Where a customer with Universal Desk Type cord switchboards changes to Centrex Service and wishes to continue the use of one or more of the existing switchboards, he may do so at the monthly rates for attendant equipment included in C.4.a. above. (C)

The customer enters into a new five year contract for any cord switchboard(s) retained and pays termination charges, if applicable, on any cord switchboard(s) not retained when he changes to Centrex Service.

(C) Indicates change.

CANCELED

PREPARED FOR USE

E435
Exhibit 41B

RATE SHEET NO. 40 SERIES OF 1761

C. RATES (Cont'd)

1. STATIONS (Cont'd)

b. APPLICATION OF RATES (Cont'd)

(4) A minimum monthly charge for 300 Centrex unrestricted main stations served directly from the main switching equipment applies.

(5) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(6) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(7) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

2. TRUNKS FOR ACCESS TO EXCHANGE AND MESSAGE TOLL SERVICE

a. CENTREX TRUNKS

Trunks from locations within the same central office district as the main switching equipment are included in the station charges in 1. preceding.

b. NON-CENTREX TRUNKS

Trunks for outgoing service [illegible]ntrex satellite through the local serving central office are provided at the [illegible]fied for private branch exchange trunks in Section 17 of this tariff.

3. DIAL SWITCHING EQUIPMENT

a. CENTREX SWITCHING EQUIPMENT

Both Centrex main and satellite switching equipment to provide standard grade service are included in the station charges in 1. preceding.

4. ATTENDANT EQUIPMENT

	Installation Charge	Monthly Rate
a. Centrex Consoles or Cord Switchboards		
First position installed at any one time	$1,000.00	$175.00
Each additional position installed at the same time as a first position	500.00	175.00

b. One hundred route feet of cable to the attendant equipment from the cable frame on the same premises is included in the above charges. Additional cable is subject to charges based on costs.

c. Only the number of attendant positions recommended by the Telephone Company will be accorded the termination charge treatment specified in B.6. preceding. Positions in excess of the number recommended by the Telephone Company will be subject to termination charges at the time of disconnection or move of the position within the specified five year minimum contract period.

d. Where a customer with cord switchboards changes to Centrex service and wishes to continue the use of one or more of the existing switchboards, he may do so at the tariff rates for said switchboards, provided said switchboard(s) are of a type which can be made suitable for Centrex operation by minor modification. The customer pays the cost of labor for such modification. The customer enters into a new five year contract for any cord switchboard(s) retained and pays termination charges, if applicable, on any cord switchboard(s) not retained when he changes to Centrex.

CANCELLED
Mar 22 1969

ISSUED JUNE 15, 1967. EFFECTIVE AUGUST 14, 1967.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E436
Exhibit 41B

OF 1973

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(1) (Cont'd)

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	Monthly Rates			
	Intercommunication Charge	Exchange Access Charge		
		Centrex I Schedule		
	(Plus Sched. A, B or C) (Exch. Acc. Chg.)	A	B	C
Per Unrestricted Main Station or Station Line:				
First 50) at	$7.50 (I)	$2.27(I)	$2.85(I)	$1.43(I)
Next 250) each	6.97	2.27	2.85	.84
Next 600) premises	5.81	1.11	1.69	.84
Over 900	4.43	.48	.74	.16

(c) For Schedule C.1.a.(1) (a) and (b) above:

	MONTHLY RATES CENTREX I SCHEDULE		
	A	B	C
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises	$ .42(I)	$ .48(I)	$ .53(I)
Per Restricted Main Station or Station Line	4.12	4.12	4.12
Per Bridged Station of:			
Unrestricted Main Station or Station Line	4.38(I)	4.38(I)	4.38(I)
Restricted Main Station or Station Line.	4.12	4.12	4.12

(2) The following monthly rates apply for Centrex II Service and Custom Centrex Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above.

Per unrestricted Main Station or Station Line	$1.58 (I)
Per Bridged Station of Unrestricted Main Station or Station Line	.53 (I)

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

(4) The exchange access or intercommunication portion of the Centrex station charge is not offered separately.

(5) Except as provided in 9 following, a minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum.

(6) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(7) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(8) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(9) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations.

(10) The term "connected premises," if used in this Section of the Tariff to denote premises when not separated by intervening property or a public thoroughfare or when directly connected by a passageway in which wires may be safely installed.

CANCELLED

(I) Indicates increase.

October 31, 1974

E437
Exhibit 41B
Pa.P.U.C.-No. 1.

F 1972

Section 20
Eighth Revised Sheet 6
Canceling Seventh Revised Sheet 6

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(1) (Cont'd)

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	Monthly Rates			
	Intercommunication Charge	Exchange Access Charge Centrex I Schedule		
Per Unrestricted Main Station or Station Line:	(Plus Sched. A, B or C) (Exch. Acc. Chg.)	A	B	C
First 50) at	$7.10	$2.15	$2.70	$1.35
Next 250) each	6.60	2.15	2.70	.80
Next 600) premises	5.50	1.05	1.60	.80
Over 900	4.20	.45	.70	.15

(c) For Schedule C.1.a.(1) (a) and (b) above:

	MONTHLY RATES CENTREX I SCHEDULE		
	A	B	C
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises..................	$ .40	$ .45	$ .50
Per Restricted Main Station or Station Line..	3.90	3.90	3.90
Per Bridged Station of:			
Unrestricted Main Station or Station Line..	4.15	4.15	4.15
Restricted Main Station or Station Line....	3.90	3.90	3.90

(2) The following monthly rates apply for Centrex II Service and Custom Centrex Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above. (C)

Per unrestricted Main Station or Station Line....	$1.50
Per Bridged Station of Unrestricted Main Station or Station Line................................	.50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

(4) The exchange access or intercommunication portion of the Centrex station charge is not offered separately. (C)

(5) Except as provided in D following, a minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum.

(6) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(7) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(8) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(9) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations.

(10) The term, "connected premises," is used in this Section of the Tariff to denote premises when not separated by intervening property or a public thoroughfare or when directly connected by a passageway in which wires may be safely installed.

(C) Indicates change.

EFFECTIVE NOVEMBER 1, 1972.

ISSUED SEPTEMBER 1, 1972.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

CANCELED

December 11 1973

E438
Exhibit 41B

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

37

Section 20
Seventh Revised Sheet 6
Canceling Sixth Revised Sheet 6

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(1) (Cont'd)

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	Monthly Rates Intercommunication Charge (Plus Sched. A, B or C Exch. Acc. Chg.)	Exchange Access Charge Centrex I Schedule A	 B	 C	
Per Unrestricted Main Station or Station Line:					
First 50) at	$7.10	$2.15	$2.70	$1.35	(C)(I)
Next 250) each	6.60	2.15	2.70	.80	
Next 600) premises	5.50	1.05	1.60	.80	
Over 900	4.20	.45	.70	.15	

(c) For Schedule C.1.a.(1) (a) and (b) above:

	MONTHLY RATES CENTREX I SCHEDULE A	 B	 C	
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises..........	$ .40	$ .45	$ .50	(C)(I)
Per Restricted Main Station or Station Line..	3.90	3.90	3.90	
Per Bridged Station of:				(C)(I)
Unrestricted Main Station or Station Line..	4.15	4.15	4.15	
Restricted Main Station or Station Line....	3.90	3.90	3.90	

(2) The following monthly rates apply for Centrex II Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above.

Per unrestricted Main Station or Station Line....	$1.50
Per Bridged Station of Unrestricted Main Station or Station Line..........................	.50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

(4) The exchange access or intercommunication portion of the Centrex station charge is not offered separately.

(5) A minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum.

(6) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(7) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(8) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(9) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations.

(10) The term, "connected premises," is used in this Section of the Tariff to denote premises when not separated by intervening property or a public thoroughfare or when directly connected by a passageway in which wires may be safely installed.

(C) Indicates change. (I) Indicates increase.

EFFECTIVE DECEMBER 14, 1971.

ISSUED DECEMBER 29, 1971.

By J. H./Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

In compliance with order of the Pennsylvania Public Utility Commission of December 14, 1971 in C. 19132.

CANCELLED

[illegible]

E439
Exhibit 41B
Pa.P.U.C.-No. 1.

Section 20
Sixth Revised Sheet 6
Canceling Fourth Revised Sheet 6

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(1) (Cont'd)

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	Monthly Rates				
	Intercommunication Charge	Exchange Access Charge Centrex I Schedule			(C)
Per Unrestricted Main Station or Station Line:	(Plus Sched. A, B or C) (Exch. Acc. Chg.)	A	B	C	(C)
First 50) at	$6.55	$1.95	$2.45	$1.20	
Next 250) each	6.05	1.95	2.45	.70	
Next 600) premises	5.05	.95	1.45	.70	
Over 900	3.85	.40	.65	.15	

(c) For Schedule C.1.a.(1) (a) and (b) above: (C)

	MONTHLY RATES CENTREX I SCHEDULE		
	A	B	C
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises..................	$ .30	$ .35	$ .40
Per Restricted Main Station or Station Line..	3.50	3.50	3.50
Per Bridged Station of:			
Unrestricted Main Station or Station Line..	3.75	3.75	3.40
Restricted Main Station or Station Line....	3.25	3.25	3.25

(2) The following monthly rates apply for Centrex II Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above.

Per unrestricted Main Station or Station Line....	$1.50
Per Bridged Station of Unrestricted Main Station or Station Line............................	.50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service. (C)

(4) The exchange access or intercommunication portion of the Centrex station charge is not offered separately.

(5) A minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum. (C)

(6) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located. (C)

(7) The unrestricted main station rates are applied for restricted main stations on premises other than the main location. (C)

(8) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location. (C)

(9) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations. (C)

(10) The term, "connected premises," is used in this Section of the Tariff to denote premises when not separated by intervening property or a public thoroughfare or when directly connected by a passageway in which wires may be safely installed. (C)

(C) Indicates change.

ISSUED NOVEMBER 3, 1971.

EFFECTIVE for billing periods beginning on or after November 4, 1971.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

Issued under Special Permission of the Pennsylvania Public Utility Commission. No. 27637 of October 18, 1971.

E440
Exhibit 41B
Pa.P.U.C.-No. 1.

0. 30 SERIES OF 1970

Section 20
Fifth Revised Sheet 6
Canceling Fourth Revised Sheet 6

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(1) (Cont'd)

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	MONTHLY RATES CENTREX I SCHEDULE A	B	C	
Per unrestricted main station line:				
First 50) At	$9.35	$9.90	$8.50	(C)(I)
Next 250) each	8.80	9.35	7.45	|
Next 600) Premises	6.60	7.15	6.35	|
Over 900)	4.70	4.95	4.40	|

(c) For Schedule C.1.a.(1) (a) and (b) above:

	A	B	C	
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises	.40	.45	.50	(C)(I)
Per Restricted Main Station or Station Line	4.00	4.00	4.00	|
Per Bridged Station of				
Unrestricted Main Station or Station Line	4.25	4.25	4.25	(C)(I)
Restricted Main Station or Station Line	4.00	4.00	4.00	|

(2) The following monthly rates apply for Centrex II Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above.

Per unrestricted Main Station or Station Line................ $1.50

Per Bridged Station of Unrestricted Main Station or Station Line. .50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

(4) A minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum.

(5) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(6) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(7) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(8) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations.

(9) The term, "connected premises," is used in this Section of the Tariff to denote premises when not separated by intervening property or a public thoroughfare or when directly connected by a passageway in which wires may be safely installed.

[illegible] EFFECTIVE WITHDRAWN
[illegible]CATION SUPPLEMENT
12 [illegible] 71

(C) Indicates change. (I) Indicates increase.

ISSUED DECEMBER 3, 1970.

EFFECTIVE FEBRUARY 3, 1971.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E441

Exhibit 41B RATE SHEET NO. 7 SERIES OF 1970

Pa.P.U.C.-No. 1.

Section 20
Fourth Revised Sheet 6
Canceling Third Revised Sheet 6

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(1) (Cont'd)

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	MONTHLY RATES CENTREX I SCHEDULE		
	A	B	C
Per unrestricted main station line:			
First 50) At	$8.50	$9.00	$7.75
Next 250) each	8.00	8.50	6.75
Next 600) Premises	6.00	6.50	5.75
Over 900)	4.25	4.50	4.00

(c) For Schedule C.1.a.(1) (a) and (b) above:

	A	B	C
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises..	.30	.35	.40
Per Restricted Main Station or Station Line	3.50	3.50	3.50
Per Bridged Station of:			
Unrestricted Main Station or Station Line	3.75	3.75	3.40
Restricted Main Station or Station Line	3.25	3.25	3.25

(2) The following monthly rates apply for Centrex II Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above.

Per Unrestricted Main Station or Station Line	$1.50
Per Bridged Station of Unrestricted Main Station or Station Line.	.50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

(4) A minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum.

(5) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(6) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(7) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(8) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations.

(9) The term, "connected premises," is used in this Section of the Tariff to denote premises when not separated by intervening property or a public thoroughfare or when directly connected by a passageway in which wires may be safely installed. (C)

CANCELED

Mar 3, 1971

(C) Indicates change.

ISSUED APRIL 22, 1970. EFFECTIVE JUNE 21, 1970.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E442
Exhibit 41B
Pa.P.U.C.-No. 1.

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Section 20
Third Revised Sheet 6
Canceling Second Revised Sheet 5

CENTREX SERVICE

C. RATES (Cont'd)

PREPARED FOR USE OF COUNSEL ONLY

1. STATIONS (Cont'd)

a. MONTHLY RATES (Cont'd)

(1) (Cont'd)

(b) The following schedule applies at all Premises other than the main location of the Centrex System.

	MONTHLY RATES CENTREX I SCHEDULE A	B	C
Per unrestricted main station line:			
First 50) At	$8.50	$9.00	$7.75
Next 250) each	8.00	8.50	6.75
Next 600) Premises	6.00	6.50	5.75
Over 900)	4.25	4.50	4.00

(c) For Schedule C.1.a.(1) (a) and (b) above:

	A	B	C
Added Charge Per Unrestricted Main Station or Station Line when Switching Equipment is on Telephone Company premises	.30	.35	.40
Per Restricted Main Station or Station Line	3.50	3.50	3.50
Per Bridged Station of:			
Unrestricted Main Station or Station Line	3.75	3.75	3.40
Restricted Main Station or Station Line	3.25	3.25	3.25

(2) The following monthly rates apply for Centrex II Service in addition to those covered in C.1.a. (1) (a), (b) and (c) above.

Per unrestricted Main Station or Station Line	$1.50
Per Bridged Station of Unrestricted Main Station or Station Line.	.50

b. APPLICATION OF RATES

(1) The exchange in which the customer's main switching equipment is normally located determines the rates for all stations of a Centrex system.

(2) In exchanges where both flat and message rate individual line business service is offered the customer may select either flat or message rate Centrex service.

(3) There is no message unit allowance with Centrex service.

(4) A minimum monthly charge for 100 Centrex unrestricted main stations or station lines located at the main location applies. Charges for restricted stations are not included in the minimum.

(5) The unrestricted main station rates are applied by restarting the station count at each premises at which one or more stations are located.

(6) The unrestricted main station rates are applied for restricted main stations on premises other than the main location.

(7) The local service area for the entire flat rate or message rate Centrex system is the same as that for Schedule I flat or Schedule II message rate individual line business line service in the central office normally serving the customer's main location.

(8) Centrex II rates apply to all unrestricted stations served from the switching equipment arranged to provide the service subject to a minimum monthly charge for 100 Centrex II unrestricted main stations.

ISSUED JULY 31, 1969. EFFECTIVE SEPTEMBER 29, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

CANCELED

PREPARED FOR USE C E443 SEL ONLY [illegible] SERIES OF [illegible]

Exhibit 41B

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Second Revised Sheet 6
Canceling First Revised Sheet 6

CENTREX SERVICE

C. RATES (Cont'd)

5. MILEAGE

a. CENTREX LINES

(1) Centrex Line Mileage

The charges per channel are the same as those provided in Section 12 of this Tariff for interexchange extension station line channels.

(2) Zone or Locality Rates

Zone or locality rate differentials for individual line service, in accordance with Pa.P.U.C.-No. 180A, apply on a per channel basis to all Centrex lines extending to service locations outside the base rate area. (C)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage charges are as prescribed in the appropriate tariff for the type of channel involved between non-Centrex locations. In addition, tie lines from non Centrex satellites are subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex service this charge is one half of the auxiliary trunk rate.

6. TIE LINE TERMINALS

a. MONTHLY RATES

For each tie line with	No Tandem Operation	Tandem Operation
One-way incoming arranged to select a dial telephone	$7.00	$10.00
One-way outgoing arranged to be selected by a dial telephone	3.50	6.50
Two-way arranged to select or be selected by a dial telephone	8.00	11.00

b. APPLICATION OF RATES

1. The above rates apply to all tie lines, to both other Centrex and non-Centrex locations, to which mileage charges apply but do not apply to tie lines to other Centrex locations to which no mileage charges apply.
2. The rates for tandem operation apply in any case where a tie line can be connected to another tie line by dialing.

7. FOREIGN EXCHANGE AND WATS LINE TERMINALS

a. MONTHLY RATES

Incoming or outgoing service, per line	$3.50
Incoming and outgoing service, per line	4.50

b. APPLICATION OF RATES

The above rates apply when dial access to these lines is provided to the stations or to an attendant or both.

8. IDENTIFICATION BY TIE LINE GROUP (C)

For identification per tie line group of toll and multi-unit calls placed over tie lines as covered in B.5. preceding, the monthly rate and connection charge for an unrestricted main station line applies per tie line group so arranged. In addition, each tie line per group so arranged is subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex Service this charge is one half of the auxiliary trunk rate.

CANCELED

[illegible] 28 19

(C) Indicates change.

ISSUED JANUARY 9, 1969. EFFECTIVE MARCH 10, 1969.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

PREPARED FOR US

E444
Exhibit 41B

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
First Revised Sheet 6
Canceling Original Sheet 6

CENTREX SERVICE

C. RATES (Cont'd).

5. MILEAGE

a. CENTREX LINES

(1) Centrex Line Mileage

The charges per channel are the same as those provided in Section 12 of this tariff for interexchange extension station line channels.

(2) Zone or Locality Rates

Zone or locality rates for individual line service, in accordance with Pa.P.U.C.-No. 180A, apply on a per channel basis to all Centrex lines extending to service locations outside the base rate area. (C)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage charges are as prescribed in the appropriate tariff for the type of channel involved between non-Centrex locations. In addition, tie lines from non-Centrex satellites are subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex service this charge is one half of the auxiliary trunk rate.

6. TIE LINE TERMINALS

a. MONTHLY RATES

	No Tandem Operation	Tandem Operation
For each tie line with		
One-way incoming arranged to select a dial telephone............	$7.00	$10.00
One-way outgoing arranged to be selected by a dial telephone.....	3.50	6.50
Two-way arranged to select or be selected by a dial telephone....	8.00	11.00

b. APPLICATION OF RATES

1. The above rates apply to all tie lines, to both other Centrex and non-Centrex locations, to which mileage charges apply but do not apply to tie lines to other Centrex locations to which no mileage charges apply.

2. The rates for tandem operation apply in any case where a tie line can be connected to another tie line by dialing.

7. FOREIGN EXCHANGE AND WATS LINE TERMINALS

a. MONTHLY RATES

Incoming or outgoing service, per line..	$3.50
Incoming and outgoing service, per line..	4.50

b. APPLICATION OF RATES

The above rates apply when dial access to these lines is provided to the stations or to an attendant or both.

CANCELED Mar 7 1969

(C) Indicates change.

ISSUED SEPTEMBER 18, 1968.

EFFECTIVE NOVEMBER 17, 1968.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

[illegible]

E445

RATE SHEET NO. 7 SERIES OF [illegible]

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Exhibit 41B
Pa.P.U.C.-No. 1.

Section 20
Original Sheet 6

CENTREX SERVICE

C. RATES (Cont'd)

5. MILEAGE

a. CENTREX LINES

(1) Centrex Line Mileage

The charges per channel are the same as those provided in Section 12 of this tariff for interexchange extension station line channels.

(2) Exchange Line Mileage

Exchange line mileage charges, or zone or locality rate differentials the same as specified for individual line service in Section 12 of this tariff apply on a per channel basis to all Centrex lines extending to service locations outside a base rate area.

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage charges are as prescribed in the appropriate tariff for the type of channel involved between non-Centrex locations. In addition, tie lines from non-Centrex satellites are subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex service this charge is one half of the auxiliary trunk rate.

6. TIE LINE TERMINALS

a. MONTHLY RATES

	No Tandem Operation	Tandem Operation
For each tie line with		
One-way incoming arranged to select a dial telephone............	$7.00	$10.00
One-way outgoing arranged to be selected by a dial telephone.....	3.50	6.50
Two-way arranged to select or be selected by a dial telephone....	8.00	11.00

b. APPLICATION OF RATES

1. The above rates apply to all tie lines, to both other Centrex and non-Centrex locations, to which mileage charges apply but do not apply to tie lines to other Centrex locations to which no mileage charges apply.
2. The rates for tandem operation apply in any case where a tie line can be connected to another tie line by dialing.

7. FOREIGN EXCHANGE AND WATS LINE TERMINALS

a. MONTHLY RATES

Incoming or outgoing service, per line..	$3.50
Incoming and outgoing service, per line..	4.50

b. APPLICATION OF RATES

The above rates apply when dial access to these lines is provided to the stations or to an attendant or both.

CANCELLED

Nov 1 1968

ISSUED JUNE 15, 1967.

EFFECTIVE AUGUST 14, 1967.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E446
Exhibit 41B

PREPARED FOR [illegible]

C. RATES (Cont'd)

2. TRUNKS FOR ACCESS TO EXCHANGE AND MESSAGE TOLL SERVICE

a. CENTREX TRUNKS

Trunks from locations within the same central office district as the main switching equipment are included in the station charges in 1. preceding.

b. NON-CENTREX TRUNKS

Trunks for outgoing service from a Centrex satellite through the local serving central office are provided at the rates quoted in the Local General Tariffs for the exchange areas in which the services are furnished.

3. DIAL SWITCHING EQUIPMENT

a. CENTREX SWITCHING EQUIPMENT

Both Centrex main and satellite switching equipment to provide standard grade service are included in the station charges in 1. preceding. A basic installation charge of $500.00 applies for establishing a system. (C)

4. ATTENDANT EQUIPMENT	Installation Charge	Monthly Rate	
a. Centrex Consoles or Cord Switchboards			(C)
Initial position and each additional position installed at the same time as the initial position	$ 500.00	$195.00	
Other positions installed subsequent to the initial position.			
First position	1,000.00	195.00	
Each additional position installed at the same time	500.00	195.00	

b. One hundred route feet of cable to the attendant equipment from the cable frame on the same premises is included in the above charges. Additional cable is subject to charges based on costs.

c. Only the number of attendant positions recommended by the Telephone Company will be accorded the termination charge treatment specified in B.7. preceding. Positions in excess of the number recommended by the Telephone Company will be subject to termination charges at the time of disconnection or move of the position within the specified five year minimum contract period.

d. Where a customer with cord switchboards, other than Universal Desk Type, changes to Centrex service and wishes to continue the use of one or more of the existing switchboards, he may do so at the tariff rates for said switchboards, provided said switchboard(s) are of a type which can be made suitable for Centrex operation by minor modification. The customer pays the cost of labor for such modification.

Where a customer with Universal Desk Type cord switchboards changes to Centrex Service and wishes to continue the use of one or more of the existing switchboards, he may do so at the monthly rates for attendant equipment included in C.4.a. above.

The customer enters into a new five year contract for any cord switchboard(s) retained and pays termination charges, if applicable, on any cord switchboard(s) not retained when he changes to Centrex Service.

5. MILEAGE

a. CENTREX LINES

(1) Centrex Line Mileage

The charges per channel are the same as those provided in Section 12 of this Tariff for interexchange extension station line channels.

(2) Zone or Locality Rates

Zone or locality rate differentials for individual line service, in accordance with Pa.P.U.C.-No. 180A, apply on a per channel basis to all Centrex lines extending to service locations outside the base rate area.

(C) Indicates change.

CANCELLED

[illegible] 11 1973

E447
Exhibit 41B

NO. 37

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
Second Revised Sheet 7
Canceling Original Sheet 7

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

2. TRUNKS FOR ACCESS TO EXCHANGE AND MESSAGE TOLL SERVICE

a. CENTREX TRUNKS

Trunks from locations within the same central office district as the main switching equipment are included in the station charges in 1. preceding.

b. NON-CENTREX TRUNKS

Trunks for outgoing service from a Centrex satellite through the local serving central office are provided at the rates quoted in the Local General Tariffs for the exchange areas in which the services are furnished. (C)

3. DIAL SWITCHING EQUIPMENT

a. CENTREX SWITCHING EQUIPMENT

Both Centrex main and satellite switching equipment to provide standard grade service are included in the station charges in 1. preceding.

4. ATTENDANT EQUIPMENT

	Installation Charge	Monthly Rate
a. Centrex Consoles or Cord Switchboards		
First position installed at any one time..............................	$1,000.00	$195.00 (C)(I)
Each additional position installed at the same time as a first position..	500.00	195.00 (C)(I)

b. One hundred route feet of cable to the attendant equipment from the cable frame on the same premises is included in the above charges. Additional cable is subject to charges based on costs.

c. Only the number of attendant positions recommended by the Telephone Company will be accorded the termination charge treatment specified in B.7. preceding. Positions in excess of the number recommended by the Telephone Company will be subject to termination charges at the time of disconnection or move of the position within the specified five year minimum contract period.

d. Where a customer with cord switchboards, other than Universal Desk Type, changes to Centrex service and wishes to continue the use of one or more of the existing switchboards, he may do so at the tariff rates for said switchboards, provided said switchboard(s) are of a type which can be made suitable for Centrex operation by minor modification. The customer pays the cost of labor for such modification.

Where a customer with Universal Desk Type cord switchboards changes to Centrex Service and wishes to continue the use of one or more of the existing switchboards, he may do so at the monthly rates for attendant equipment included in C.4.a. above.

The customer enters into a new five year contract for any cord switchboard(s) retained and pays termination charges, if applicable, on any cord switchboard(s) not retained when he changes to Centrex Service.

5. MILEAGE

a. CENTREX LINES

(1) Centrex Line Mileage

The charges per channel are the same as those provided in Section 12 of this Tariff for interexchange extension station line channels.

(2) Zone or Locality Rates

Zone or locality rate differentials for individual line service, in accordance with Pa.P.U.C.-No. 1&0A, apply on a per channel basis to all Centrex lines extending to service locations outside the base rate area.

(C) Indicates change. (I) Indicates increase.

ISSUED DECEMBER 29, 1971. EFFECTIVE DECEMBER 14, 1971.

By J. H. Reiff, Assistant Vice President, One Parkway, Philadelphia, Pa.

In compliance with order of the Pennsylvania Public Utility Commission of December 14, 1971 in C. 19132.

CANCELLED

E448

Exhibit 41B

I NO. 30 SERIES OF 1970

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
First Revised Sheet 7
Canceling Original Sheet 7

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

Not Effective Withdrawn.

Cancelled in Supplement

C. RATES (Cont'd)

2. TRUNKS FOR ACCESS TO EXCHANGE AND MESSAGE TOLL SERVICE

a. CENTREX TRUNKS

Trunks from locations within the same central office district as the main switching equipment are included in the station charges in 1. preceding.

b. NON-CENTREX TRUNKS

Trunks for outgoing service from a Centrex satellite through the local serving central office are provided at the rates quoted in the Local General Tariffs for the exchange areas in which the services are furnished. (C)

3. DIAL SWITCHING EQUIPMENT

a. CENTREX SWITCHING EQUIPMENT

Both Centrex main and satellite switching equipment to provide standard grade service are included in the station charges in 1. preceding.

4. ATTENDANT EQUIPMENT

	Installation Charge	Monthly Rate	
a. Centrex Consoles or Cord Switchboards			
First position installed at any one time	$1,000.00	$200.00	(C)(I)
Each additional position installed at the same time as a first position	500.00	200.00	(C)(I)

b. One hundred route feet of cable to the attendant equipment from the cable frame on the same premises is included in the above charges. Additional cable is subject to charges based on costs.

c. Only the number of attendant positions recommended by the Telephone Company will be accorded the termination charge treatment specified in B.7. preceding. Positions in excess of the number recommended by the Telephone Company will be subject to termination charges at the time of disconnection or move of the position within the specified five year minimum contract period.

d. Where a customer with cord switchboards, other than Universal Desk Type, changes to Centrex service and wishes to continue the use of one or more of the existing switchboards, he may do so at the tariff rates for said switchboards, provided said switchboard(s) are of a type which can be made suitable for Centrex operation by minor modification. The customer pays the cost of labor for such modification.

Where a customer with Universal Desk Type cord switchboards changes to Centrex Service and wishes to continue the use of one or more of the existing switchboards, he may do so at the monthly rates for attendant equipment included in C.4.a. above.

The customer enters into a new five year contract for any cord switchboard(s) retained and pays termination charges, if applicable, on any cord switchboard(s) not retained when he changes to Centrex service.

5. MILEAGE

a. CENTREX LINES

(1) Centrex Line Mileage

The charges per channel are the same as those provided in Section 12 of this Tariff for interexchange extension station line channels.

(2) Zone or Locality Rates

Zone or locality rate differentials for individual line service, in accordance with Pa.P.U.C.-No. 180A, apply on a per channel basis to all Centrex lines extending to service locations outside the base rate area.

(C) Indicates change. (I) Indicates increase.

ISSUED DECEMBER 3, 1970. EFFECTIVE FEBRUARY 3, 1971.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E449

Exhibit 41B

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

2. TRUNKS FOR ACCESS TO EXCHANGE AND MESSAGE TOLL SERVICE

a. CENTREX TRUNKS

Trunks from locations within the same central office district as the main switching equipment are included in the station charges in 1. preceding.

b. NON-CENTREX TRUNKS

Trunks for outgoing service from a Centrex satellite through the local serving central office are provided at the rates specified for private branch exchange trunks in Section 17 of this Tariff.

3. DIAL SWITCHING EQUIPMENT

a. CENTREX SWITCHING EQUIPMENT

Both Centrex main and satellite switching equipment to provide standard grade service are included in the station charges in 1. preceding.

4. ATTENDANT EQUIPMENT

	Installation Charge	Monthly Rate
a. Centrex Consoles or Cord Switchboards		
First position installed at any one time..............................	$1,000.00	$175.00
Each additional position installed at the same time as a first position..	500.00	175.00

b. One hundred route feet of cable to the attendant equipment from the cable frame on the same premises is included in the above charges. Additional cable is subject to charges based on costs.

c. Only the number of attendant positions recommended by the Telephone Company will be accorded the termination charge treatment specified in B.7. preceding. Positions in excess of the number recommended by the Telephone Company will be subject to termination charges at the time of disconnection or move of the position within the specified five year minimum contract period.

d. Where a customer with cord switchboards, other than Universal Desk Type, changes to Centrex service and wishes to continue the use of one or more of the existing switchboards, he may do so at the tariff rates for said switchboards, provided said switchboard(s) are of a type which can be made suitable for Centrex operation by minor modification. The customer pays the cost of labor for such modification.

Where a customer with Universal Desk Type cord switchboards changes to Centrex Service and wishes to continue the use of one or more of the existing switchboards, he may do so at the monthly rates for attendant equipment included in C.4.a. above.

The customer enters into a new five year contract for any cord switchboard(s) retained and pays termination charges, if applicable, on any cord switchboard(s) not retained when he changes to Centrex Service.

5. MILEAGE

a. CENTREX LINES

(1) Centrex Line Mileage

The charges per channel are the same as those provided in Section 12 of this Tariff for interexchange extension station line channels.

(2) Zone or Locality Rates

Zone or locality rate differentials for individual line service, in accordance with Pa.P.U.C.-No. 1801, apply on a per channel basis to all Centrex lines extending to service locations outside the base rate area.

CANCELED

December 13 1971

E450
Exhibit 41B

37 SERIES OF 1971

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

5. MILEAGE (Cont'd)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage charges are as prescribed in the appropriate Tariff for the type of channel involved between non-Centrex locations. In addition, tie lines from non-Centrex satellites are subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex service this charge is one half of the auxiliary trunk rate.

6. TIE LINE TERMINALS (C)

a. MONTHLY RATES AND INSTALLATION CHARGES

	Installation Charge	Monthly Rate	
★ ★	★		
One-way incoming arranged to select a dial telephone.........	$25.00	$11.00	(I)
One-way outgoing arranged to be selected by a dial telephone.	25.00	10.00	
Two-way arranged to select or be selected by a dial telephone	25.00	13.50	

b. APPLICATION OF RATES

1. The above rates apply to all tie lines, to both other Centrex and non-Centrex locations, to which mileage charges apply but do not apply to tie lines to other Centrex locations to which no mileage charges apply.

★ ★ ★ (C)

2. When a tie line is station terminated (assigned a station number) on Centrex Service and is arranged for outgoing access to the exchange network the monthly rate and connection charge for an unrestricted main station line applies in addition to the above tie line terminal charges.

3. When a tie line is station terminated on Centrex Service and is arranged for access to or from the exchange network it is subject to a charge equal to one half the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex Service this charge is one half of the auxiliary trunk rate. This charge is in addition to the above tie line terminal charges. (C)

7. FOREIGN EXCHANGE AND WATS LINE TERMINALS

a. MONTHLY RATES

Incoming and/or outgoing service, per line..$5.50 (C)(I)

★ ★ ★

b. APPLICATION OF RATES

The above rates apply when dial access to these lines is provided to the stations or to an attendant or both.

8. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS

a. MONTHLY RATES

Centrex I	In the Philadelphia Suburban Exchange and the Pittsburgh Suburban Exchange, the monthly rate for a student Centrex station is the same as for Schedule III individual residence extended flat rate service for the exchange and zone in which the institution is located. In all other exchanges, the monthly rate is the same as for Schedule I individual residence flat rate service for the exchange in which the institution is located.
Centrex II	Same as for Centrex I, plus $1.00 per main station and $.50 per bridged station.

(C) Indicates change. (I) Indicates increase.

EFFECTIVE DECEMBER 14, 1971.

ISSUED DECEMBER 29, 1971.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

In compliance with order of the Pennsylvania Public Utility Commission of December 14, 1971 in C. 19132.

CANCELLED

E451

Exhibit 41B

C. RATES (Cont'd)

5. MILEAGE (Cont'd)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage charges are as prescribed in the appropriate Tariff for the type of channel involved between non-Centrex locations. In addition, tie lines from non-Centrex satellites are subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex service this charge is one half of the auxiliary trunk rate.

6. TIE LINE TERMINALS

a. MONTHLY RATES AND INSTALLATION CHARGES

	Installation Charge	Monthly Rate	
	*		(C)
One-way incoming arranged to select a dial telephone......	$25.00	$11.00	(I)
One-way outgoing arranged to be selected by a dial telephone.	25.00	10.00	
Two-way arranged to select or be selected by a dial telephone	25.00	13.50	

b. APPLICATION OF RATES

1. The above rates apply to all tie lines, to both other Centrex and non-Centrex locations, to which mileage charges apply but do not apply to tie lines to other Centrex locations to which no mileage charges apply.

* * * (C)

2. When a tie line is station terminated (assigned a station number) on Centrex Service and is arranged for outgoing access to the exchange network the monthly rate and connection charge for an unrestricted main station line applies in addition to the above tie line terminal charges.

3. When a tie line is station terminated on Centrex Service and is arranged for access to or from the exchange network it is subject to a charge equal to one half the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex Service this charge is one half of the auxiliary trunk rate. This charge is in addition to the above tie line terminal charges. (C)

7. FOREIGN EXCHANGE AND WATS LINE TERMINALS

a. MONTHLY RATES

Incoming and/or outgoing service, per line..$5.50 (C)(I)

* *

b. APPLICATION OF RATES

The above rates apply when dial access to these lines is provided to the stations or to an attendant only.

8. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS

a. MONTHLY RATES

Centrex I	In the Philadelphia Suburban Exchange and the Pittsburgh Suburban Exchange, the monthly rate for a student Centrex station is the same as for Schedule III individual residence extended flat rate service for the exchange and zone in which the institution is located. In all other exchanges, the monthly rate is the same as for Schedule I individual residence flat rate service for the exchange in which the institution is located.
Centrex II	Same as for Centrex I, plus $1.00 per main station and $.50 per bridged station.

NOT MADE EFFECTIVE WITHDRAWN

CANCELLATION SUPPLEMENT

P-1

(C) Indicates change. (I) Indicates increase.

ISSUED DECEMBER 3, 1970.

EFFECTIVE FEBRUARY 3, 1971.

By. J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E452
Exhibit 41B

[illegible] SHEET NO. [illegible] SERIES OF 67

Pa.P.U.C.-No. 1.

Section 20
First Revised Sheet 8
Canceling Original Sheet 8

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

CENTREX SERVICE

C. RATES (Cont'd)

5. MILEAGE (Cont'd)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage charges are as prescribed in the appropriate Tariff for the type of channel involved between non-Centrex locations. In addition, tie lines from non-Centrex satellites are subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex service this charge is one half of the auxiliary trunk rate.

6. TIE LINE TERMINALS

a. MONTHLY RATES

	No Tandem Operation	Tandem Operation
For each tie line with		
One-way incoming arranged to select a dial telephone.............	$7.00	$10.00
One-way outgoing arranged to be selected by a dial telephone.....	3.50	6.50
Two-way arranged to select or be selected by a dial telephone....	8.00	11.00

b. APPLICATION OF RATES

1. The above rates apply to all tie lines, to both other Centrex and non-Centrex locations, to which mileage charges apply but do not apply to tie lines to other Centrex locations to which no mileage charges apply.

2. The rates for tandem operation apply in any case where a tie line can be connected to another tie line or the exchange network by dialing. (C)

3. When a tie line is station terminated (assigned a station number) on Centrex Service and is arranged for outgoing access to the exchange network the monthly rate and connection charge for an unrestricted main station line applies in addition to the above tie line terminal charges.

4. When a tie line is station terminated on Centrex Service and is arranged for access to or from the exchange network it is subject to a charge equal to one half the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex Service this charge is one half of the auxiliary trunk rate. This charge is in addition to the above tie line terminal charges.

7. FOREIGN EXCHANGE AND WATS LINE TERMINALS

a. MONTHLY RATES

Incoming or outgoing service, per line..............................	$3.50
Incoming and outgoing service, per line.............................	4.50

b. APPLICATION OF RATES

The above rates apply when dial access to these lines is provided to the stations or to an attendant or both.

8. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS

a. MONTHLY RATES

Centrex I	In the Philadelphia Suburban Exchange and the Pittsburgh Suburban Exchange, the monthly rate for a student Centrex station is the same as for Schedule III individual residence extended flat rate service for the exchange and zone in which the institution is located. In all other exchanges, the monthly rate is the same as for Schedule I individual residence flat rate service for the exchange in which the institution is located.
Centrex II	Same as for Centrex I, plus $1.00 per main station and $.50 per bridged station.

CANCELLED
December 13 1971

(C) Indicates change

ISSUED OCTOBER 23, 1969.

EFFECTIVE DECEMBER 22, 1969.

By. J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E453
Exhibit 41B

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

5. MILEAGE (Cont'd)

b. NON-CENTREX LINES

For non-Centrex lines terminating in Centrex equipment the mileage charges are as prescribed in the appropriate Tariff for the type of channel involved between non-Centrex locations. In addition, tie lines from non-Centrex satellites are subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex service this charge is one half of the auxiliary trunk rate.

6. TIE LINE TERMINALS

a. MONTHLY RATES

For each tie line with	No Tandem Operation	Tandem Operation
One-way incoming arranged to select a dial telephone............	$7.00	$10.00
One-way outgoing arranged to be selected by a dial telephone.....	3.50	6.50
Two-way arranged to select or be selected by a dial telephone....	8.00	11.00

b. APPLICATION OF RATES

1. The above rates apply to all tie lines, to both other Centrex and non-Centrex locations, to which mileage charges apply but do not apply to tie lines to other Centrex locations to which no mileage charges apply.

2. The rates [illegible] ation apply in any case where a tie line can be connected to another tie [illegible] ing.

7. FOREIGN EXCHANGE AN[illegible]ATS LINE TERMINALS

a. MONTHLY RATES

Incoming or outgoing service, per line..	$3.50
Incoming and outgoing service, per line..	4.50

b. APPLICATION OF RATES

The above rates apply when dial access to these lines is provided to the stations or to an attendant or both.

(C)

8. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS

a. MONTHLY RATES

Centrex I	In the Philadelphia Suburban Exchange and the Pittsburgh Suburban Exchange, the monthly rate for a student Centrex station is the same as for Schedule III individual residence extended flat rate service for the exchange and zone in which the institution is located. In all other exchanges, the monthly rate is the same as for Schedule I individual residence flat rate service for the exchange in which the institution is located.
Centrex II	Same as for Centrex I, plus $1.00 per main station and $.50 per bridged station.

CANCELED

December 2, 1969

(C) Indicates change.

ISSUED JULY 31, 1969.

EFFECTIVE SEPTEMBER 29, 1969.

By. J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E454 LKILS OF

Exhibit 41B

THE BELL TELEPHONE
COMPANY OF PENNSYLVANIA

Pa.P.U.C.-No. 1.

Section 20
First Revised Sheet 9
Canceling Original Sheet 9

CENTREX SERVICE

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

8. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd)

b. APPLICATION OF RATES

(1) In the Philadelphia Suburban Exchange and the Pittsburgh Suburban Exchange the flat rate calling area and the message unit allowance for a student Centrex station are the same as for Schedule III individual residence extended flat rate service for the exchange in which the main Centrex service is offered. In all other exchanges the flat rate calling area and the message unit allowance for a student Centrex station are the same as for Schedule I individual residence flat rate service for the exchange in which the main Centrex service is offered. The message unit allowance, where applicable, is not transferable from one student Centrex station to another.

(2) Service at student Centrex stations not in the same central office district as the switching equipment for the educational institution's Centrex service is subject to the channel mileage charges for Centrex Lines as provided elsewhere in this Tariff.

(3) Connection, reconnection, installation, service and move charges for student Centrex service are the same as those set forth in this Tariff for Centrex service in Section 22A.

(4) Bridged stations for student Centrex service will be provided at the same monthly and non-recurring charges as for residence extension stations.

(5) Student Centrex stations may not be suspended.

(6) No connection or reconnection charge applies when a new billing identity is established for a student Centrex station, if the station is left in service.

9. IDENTIFICATION BY TIE LINE GROUP

For identification per tie line group of toll and multi-unit calls placed over tie lines as covered in B.5. preceding, the monthly rate and connection charge for an unrestricted main station line applies per tie line group so arranged. In addition, each tie line per group so arranged is subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex Service this charge is one half of the auxiliary trunk rate.

10. EXTENSION OF CENTREX II FEATURES TO ALL CALLS (C)

The features of consultation hold-all calls, add-on conference-all calls and call transfer individual-all calls may be furnished as a package where central office equipment and facilities are available. A monthly charge of $.25 per unrestricted main station or station line and bridged station of an unrestricted main station or station line will apply. This charge is in addition to the rates for Centrex II Service.

D. CUSTOM CENTREX SERVICE

1. Service Features

a. Custom Centrex Service at the rates quoted herein consists of switching equipment located on Telephone Company premises, connected by lines to stations on the subscriber's premises. The service includes one free directory listing and the following features:

Add On - All Calls
Call Transfer - All Calls
Consultation Hold - All Calls
Direct Inward Dialing
Direct Outward Dialing
Intercept
Station Hunting
Station Identification - Automatic
Station to Station Calling

CANCELED
December 11, 1973

(C) Indicates change.

ISSUED SEPTEMBER 1, 1972.

EFFECTIVE NOVEMBER 1, 1972.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

E455
Exhibit 41B

RATE SHEET NO. [illegible] SERIES [illegible]

PREPARED FOR USE OF COUNSEL ONLY

C. RATES (Cont'd)

8. CENTREX SERVICE AT EDUCATIONAL INSTITUTIONS (Cont'd) (C)

b. APPLICATION OF RATES

(1) In the Philadelphia Suburban Exchange and the Pittsburgh Suburban Exchange the flat rate calling area and the message unit allowance for a student Centrex station are the same as for Schedule III individual residence extended flat rate service for the exchange in which the main Centrex service is offered. In all other exchanges the flat rate calling area and the message unit allowance for a student Centrex station are the same as for Schedule I individual residence flat rate service for the exchange in which the main Centrex service is offered. The message unit allowance, where applicable, is not transferable from one student Centrex station to another.

(2) Service at student Centrex stations not in the same central office district as the switching equipment for the educational institution's Centrex service is subject to the channel mileage charges for Centrex Lines as provided elsewhere in this Tariff.

(3) Connection, reconnection, installation, service and move charges for student Centrex service are the same as those set forth in this Tariff for Centrex service in Section 22A.

(4) Bridged stations for student Centrex service will be provided at the same monthly and non-recurring charges as for residence extension stations.

(5) Student Centrex stations may not be suspended.

(6) No connection or reconnection charge applies when a new billing identity is established for a student Centrex station, if the station is left in service.

9. IDENTIFICATION BY TIE LINE GROUP

For identification per tie line group of toll and multi-unit calls placed over tie lines as covered in B.5. preceding, the monthly rate and connection charge for an unrestricted main station line applies per tie line group so arranged. In addition, each tie line per group so arranged is subject to a charge equal to one half of the rate for a branch exchange trunk in the office in which the main Centrex switching equipment is located. With message rate Centrex Service this charge is one half of the auxiliary trunk rate.

(C) Indicates change.

CANCELED

October 31, 1972

E456
Exhibit 41B ILS OF

PREPARED FOR USE OF COUNSEL ONLY

CENTREX SERVICE

(C)

D. CUSTOM CENTREX SERVICE (Cont'd)

1. Service Features (Cont'd)

b. A switchboard or attendant console is not furnished for Custom Centrex Service; however, the subscriber may designate a selected station or stations to perform attendant functions. Incoming calls to the main listed number are connected to the selected station and then completed to the desired party by operation of the call transfer feature.

2. Regulations

a. Custom Centrex Service requires special central office equipment and will be provided only from offices where facilities are available as specified below.

Exchange	Central Offices
Philadelphia Zone 1	Locust 3, Locust 7, 448, 561, 585, 587, 629, 665, 732, 786, 811, 854, 864, 985
Pittsburgh Zone 1	562, 566, 281, 288, 433, 434

b. Custom Centrex Stations may be associated with the main switching equipment only. Satellite switching equipment is not offered with Custom Centrex Service.

c. This service is furnished at the rates quoted herein for subscribers within 1 Mile airline distance of the serving central office.

d. All other regulations for Centrex Service apply to Custom Centrex Service.

3. Rates and Charges

	Installation Charge	Monthly Rate
a. Common Equipment	$500.00	$75.00

b. The monthly rate for unrestricted and restricted Custom Centrex main stations is the cumulative total of the applicable Intercommunication and Exchange Access charge, C.1.a. (1) (a) preceding, the added charge when switching equipment is located on Telephone Company premises, C.1.a. (1) (c) and the added charge for Centrex II Service, C.1.a. (2).

A minimum monthly charge for twenty main stations at the main location applies.

c. The Bridged Station charge for unrestricted main stations, C.1. preceding, applies for both restricted and unrestricted bridged stations for Custom Centrex Service.

d. Switching Arrangements are charged, on a per line basis, for Foreign Exchange, WATS, Tie Line Circuits or lines to other switching systems at the rate specified in C.7.a. preceding.

	Monthly Rate
e. TOUCH-TONE Calling Service, Custom Centrex Stations or Station Lines, each	$.65

f. Custom Centrex Service is furnished subject to termination charges as specified in B.7. preceding except that the minimum contract period is three years.

g. All other rates for Centrex Service, such as application of message units, definition of local service area, off premises stations, tie line terminals, etc., apply to Custom Centrex Service.

CANCELED

July 22 1973

(C) Indicates change.

E457
Exhibit 41B

E SHEET NO. /

CENTREX SERVICE

A. GENERAL

1. SERVICE FEATURES

a. Centrex I Service provides for the following service features:

Direct Inward Dialing

Incoming calls from the exchange or toll network may be dialed directly to completion to any called station served by the Centrex main or satellite switching equipment without the help of an attendant. (C)

Direct Outward Dialing

Outward calls may be dialed directly to completion from any unrestricted station served by the Centrex main or satellite switching equipment without the help of an attendant. (C)

Station to Station Calling

Calls may be dialed directly to completion between any two stations of a Centrex System.

Call Transfer - Attendant

An indialed call to a station may be transferred to another station on the same Centrex System with the help of an attendant.

Intercept

Calls dialed to unassigned numbers may be routed to an attendant or to a recorded announcement.

Station Identification

An itemized list of toll calls and the total number of message units for multi-unit local calls are associated on the bill with the number of each originating station line.

Station Hunting

Station lines may be arranged in groups of up to 10, so that calls to a busy line in a group will be completed to any higher numbered line in the group which is not busy. Eight such groups per 100 station lines may be provided. Additional hunting arrangements may be provided within the normal capability of the serving equipment. (C)

Night Answering Service

A key telephone will be provided on the same premises as the attendant positions with facilities to permit the receipt of three simultaneous calls. Such night service may be activated by an appropriate control arrangement at the attendant position.

Attendant Service

Incoming calls to the main listed number are answered by an attendant, who may complete the call to the desired station. An unrestricted station user may dial the attendant over attendant lines to secure help in the completion of an outgoing call.

b. Centrex II Service provides for the following service features in addition to those included in 1.a. above.

Call Transfer - Individual

By operation of the switchhook, a station user may hold an indialed call, dial another station line or the attendant and transfer the incoming call to that party.

Consultation Hold

By operation of the switchhook, a station user may hold an existing indialed call, dial another station line or the attendant for consultation and then return to and complete the original call.

Add-On

By operation of the switchhook, a station user may hold an indialed call, dial another station line, and then, by again operating the switchhook, add the incoming call to the connection for a 3-way conversation.

Trunk Answer From Any Station

When the attendant equipment night service feature is activated, any unrestricted station user at the main location can answer incoming calls indialed to the attendant by dialing a prearranged code. After the incoming call is answered it may be transferred to another station in the same manner as described under Call Transfer-Individual above.

(C) Indicates change.

ISSUED APRIL 22, 1970 EFFECTIVE JUNE 21, 1970.

By J. H. Reiff, Assistant Vice-President, One Parkway, Philadelphia, Pa.

CANCELED

October 31 1972

E458
Exhibit 41B

CENTREX SERVICE

A. GENERAL

1. SERVICE FEATURES

a. Centrex I Service provides for the following service features: (C)

Direct Inward Dialing

Incoming calls may be dialed directly to completion to any called station served by the Centrex main or satellite switching equipment without the help of an attendant.

Direct Outward Dialing

Outward calls may be dialed directly to completion from any station served by the Centrex main or satellite switching equipment without the help of an attendant.

Station to Station Calling

Calls may be dialed directly to completion between any two stations of a Centrex System.

Call Transfer - Attendant

An indialed call to a station may be transferred to another station on the same Centrex System with the help of an attendant.

Intercept

Calls dialed to unassigned numbers may be routed to an attendant or to a recorded announcement.

Station Identification

An itemized list of toll calls and the total number of message units for multi-unit local calls are associated on the bill with the number of each originating station line.

Station Hunting

Station lines may be arranged in groups of up to 10, so that calls to a busy line in a group will be completed to any higher numbered line in the group which is not busy. Eight such groups per 100 station lines may be provided.

Night Answering Service

A key telephone will be provided on the same premises as the attendant positions with facilities to permit the receipt of three simultaneous calls. Such night service may be activated by an appropriate control arrangement at the attendant position.

Attendant Service

Incoming calls to the main listed number are answered by an attendant, who may complete the call to the desired station. An unrestricted station user may dial the attendant over attendant lines to secure help in the completion of an outgoing call.

b. Centrex II Service provides for the following service features in addition to those included in 1.a. above. (C)

Call Transfer - Individual

By operation of the switchhook, a station user may hold an indialled call, dial another station line or the attendant and transfer the incoming call to that party.

Consultation Hold

By operation of the switchhook, a station user may hold an existing indialed call, dial another station line or the attendant for consultation and then return to and complete the original call.

Add-On

By operation of the switchhook, a station user may hold an indialed call, dial another station line, and then, by again operating the switchhook, add the incoming call to the connection for a 3-way conversation.

Trunk Answer From Any Station

When the attendant equipment night service feature is activated, any unrestricted station user at the main location can answer incoming calls indialed to the attendant by dialing a prearranged code. After the incoming call is answered it may be transferred to another station in the same manner as described under Call Transfer-Individual above.

(C) Indicates change.

CANCELED

E459
EXHIBIT 41C
Tariff pages filed by Michigan Bell

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Third Revised Sheet 17.7a
Cancels Second Revised Sheet 17.7a

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY .... DATE ....
FILED WITH M.P.U.C. 4-14-61
FILED WITH AUD. OF REC. 4-14-61

PLAINTIFF
EXHIBIT
U. S. DIST. COURT
S. D. OF N. Y.
41 C

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (C)

a. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities. (C)

b. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises. (N)

c. The primary features of Centrex service are as follows: (T)

(1) Inward Dialing which permits incoming local and toll calls to be dialed directly to stations of the system.

(2) Outward Dialing which permits dial stations of the system to dial outgoing calls to local and direct distance dialed points.

(3) Station Identification which provides for the recording and identification of stations making outward direct distance dialed toll calls and operator handled toll calls for billing purposes. (T)

(4) Dial Intercommunication between stations.

d. Centrex-CO P.B.X. Systems are provided for: (N)

(1) Business Service

(2) Combined administrative and residence service for colleges, universities, and similar educational institutions.

e. Location and Classification of Stations

(1) Business Stations

(a) Stations located on the premises of a business customer or in the administrative buildings of a college or university, faculty clubs, student unions, and administrative quarters of dormitories.

(b) Stations located on premises other than the customer's. Such stations are provided only if a separate exchange service is also furnished at the same off-premises location.

(2) Residence Stations

Stations located in the living quarters (Dormitories, apartments, etc.) of students, faculty members and employees when such quarters are provided by the college or university. (N)

Issued under authority of Mich.Pub.Serv. Comm. Order dated April 6, 1961, Case U-539

Issued: April 18, 1961

Effective: April 18, 1961

By H. W. Goodman, Vice President
Detroit, Michigan

E460
Exhibit 41C

SERVICE BY ________ DATE ________
FILED WITH M. P. S. C. 5-23-62
FILED WITH AUD. GEN'L. 5-29-62

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems

a. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

b. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

c. The primary features of Centrex service are as follows:

(1) Inward Dialing which permits incoming local and toll calls to be dialed directly to stations of the system.

(2) Outward Dialing which permits dial stations of the system to dial outgoing calls to local and direct distance dialed points.

(3) Station Identification which provides for the recording and identification of stations making outward direct distance dialed toll calls and operator handled toll calls for billing purposes.

(4) Dial Intercommunication between stations.

d. Centrex-CO P.B.X. Systems are provided for:

(1) Business Service

(2) Combined administrative and residence service for colleges, universities, and similar educational institutions.

e. Location and Classification of Stations

(1) Business Stations

(a) Stations located on the premises of a business customer or in the administrative buildings of a college or university, faculty clubs, student unions, and administrative quarters of dormitories.

(b) Stations located on premises other than the customer's. Such stations are provided only if a separate exchange service is also furnished at the same off-premises locations.

(2) Residence Stations

(a) Nonrestricted. (C)

Nonrestricted stations provide all service features as specified in c. above on stations located in the living quarters (Dormitories, apartments, etc.) of students, faculty members and employees when such quarters are provided by the college or university. (C)

Issued under authority of Mich.Pub.Serv.Comm.Order dated May 17, 1962, Case No.U-977

Issued: May 21, 1962

Effective: June 1, 1962

By D. E. McGaw, Vice President
Detroit, Michigan

[illegible] BY ______ DATE ______
FILED WITH M.P.U.C. 4-14-61
FILED WITH AUD. OF REC. 4-14-61

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued) (C)

e. Location and Classification of Stations (Continued) (N)

(3) Extension Stations

(a) Business extension stations are furnished on premises provided by the customer. When located on premises other than the customer's, a separate exchange service must be furnished at the same off-premises location.

(b) Residence extensions are provided only in the same room, suite or apartment as the main station. (N)

f. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided as specified herein: (T) (T)

(1) Business Stations (N)

Department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the rate specified for Extra Listings for business service in this tariff.

(2) Residence Stations

Indented listings under the main listing are not provided. The individual names are listed only in the alphabetical section at the rate specified for Extra Listings for residence service in this tariff.

g. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company. (N)

E462
Exhibit 41C

APPROVED BY ______ DATE
CHECKED WITH M.P.S.C. 5-23-62
FILED WITH AUD GEN'L 5-29-62

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

e. Location and Classification of Stations (Continued)

(2) Residence Stations (Continued)

(b) Restricted. (N)

Restricted summer service provides only intercommunicating calls between all stations on the same system. It will be provided for a minimum period of three months during the months of June, July, August and September only. The service is not provided on individual stations but on groups of stations. It is offered only where all rooms of a dormitory floor or all rooms of a floor of a dormitory wing are involved. Further, it is provided only in rooms occupied by other than regularly enrolled college or university students. (N)

(3) Extension Stations

(a) Business extension stations are furnished on premises provided by the customer. When located on premises other than the customer's, a separate exchange service must be furnished at the same off-premises location.

(b) Residence extensions are provided only in the same room, suite or apartment as the main station.

f. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided as specified herein:

(1) Business Stations

Department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the rate specified for Extra Listings for business service in this tariff.

(2) Residence Stations

Indented listings under the main listing are not provided. The individual names are listed only in the alphabetical section at the rate specified for Extra Listings for residence service in this tariff.

g. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

E463
Exhibit 41C

APPROVED BY ______ DATE ______
FILED WITH M.P.U.C. 4-14-61
FILED WITH AUD. OF ACC. 4-14-61

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued) (C)

h. Rates

(1) Manual Switching Equipment (D)(R)(1)

(a) Consoles (N)

A console is a cordless type attendant position which provides a means of originating outgoing calls, completing incoming calls to stations associated with the system and transferring central office calls from station to station.

Installation Charge, per position	$200.00
Monthly Charge, per position	150.00 (N)

(b) Special Switchboard Positions in the Midland, Michigan exchange.# (C)

Provide multiple appearances of trunks for establishing connections to stations not appearing on the switchboard positions. (Dial stations do not appear on the switchboard positions.) Machine Ringing, Audible Ringing and Idle Trunk Indicating are also provided.

Installation Charge, per position	$150.00
Monthly Charge, per position	100.00

Not provided on new installations. Provided only on existing installations in service on April 18, 1961. (C)

(1) Basic Service Charge discontinued.

Material formerly on this Sheet now appears on Sheet 17.7n.

Issued under authority of Mich.Pub.Serv.Comm. Order dated April 6, 1961, Case U-539

Issued: April 18, 1961 Effective: April 18, 1961

By H. W. Goodman, Vice President
Detroit, Michigan

E464
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY ________ DATE ________
FILED WITH M.P.S.C. 4-14-61
FILED WITH AUD. OF ACC. 4-14-61

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued) (C)

h. Rates (Continued)

(2) Main Stations

(a) Monthly Charges

(I) Business Stations (C)

(A) Flat Rate Service (N)

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50(I)	$7.50(N)	$8.50(N)
Next 250 Stations, each	5.75(I)	6.50(N)	7.50(N)
Next 500 Stations, each	5.50(I)	6.00(N)	6.75(N)
All Addl. Stations, each	5.25(I)	5.50(N)	6.00(N)

(N)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided. (N)

(B) Measured Rate Service	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

(N)

E465
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY .... DATE ....
FILED WITH M.P.S.C. 4-14-61
FILED WITH AUD. OF ACC. 4-14-61

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued) (C)

h. Rates (Continued)

(2) Main Stations (Continued)

(a) (I) (B) Measured Rate Service (Continued) (N)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(II) Residence Stations

Residence Stations are provided at a rate which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service. (N)

(b) Service Connection Charges

(I) Business Stations (T)

	Schedules as Specified Under Service Connection Charges in This Tariff (N)			
	I	II	III	IV (N)
Service Connection Charge, each	$4.50(I)	$5.00(N)	$5.50(N)	$6.00(N)

(II) Residence Stations (N)

Service Connection Charges as specified in Tariff M.P.S.C. No. 2 for residence service. (N)

(3) Extension Stations

(a) Monthly Charges

(I) Business Stations (T)

Flat Rate Service, each	$3.50	(T)
Measured Rate Service, each	3.25	(N)

Issued under authority of Mich.Pub.Serv.Comm.Order dated April 6, 1961, Case U-539

Issued: April 18, 1961

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By H. W. Goodman, Vice President
Detroit, Michigan

E466
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY ____ DATE ____
FILED WITH M.P.U.C. 8-28-61
FILED WITH AUD OF REC. 9-8-61

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

h. Rates (Continued)

(2) Main Stations (Continued)

(a) (I) (B) Measured Rate Service (Continued)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(II) Residence Stations

Residence Stations are provided at a rate which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.

(b) Service Connection Charges

(I) Business Stations

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1 (T)			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

(II) Residence Stations

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. (T)

(3) Extension Stations

(a) Monthly Charges

(I) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

Issued under authority of Mich.Pub.Serv. Comm. Order dated Jul. 20, 1961, Case U-653

Issued: August 25, 1961

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By D. E. McGaw, Vice President
Detroit, Michigan

E467

Exhibit 41C

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5-23-62
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TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

h. Rates (Continued)

(2) Main Stations (Continued)

(a) (I) (B) Measured Rate Service (Continued)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(II) Residence Stations

i - Non-restricted residence stations are provided at a rate which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service. (T)

ii - Restricted residence stations are provided at a rate of $3.25 each per month. (N)
(N)

(b) Service Connection Charges

(I) Business Stations

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(II) Residence Stations (Non-restricted and restricted) (T)

Service Connection Charges as specified in Tariff M.P.S.C. No 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa. (T)
|
(T)

(3) Extension Stations

(a) Monthly Charges

(I) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

Issued under authority of Mich.Pub.Serv.Comm.Order dated May 17, 1962, Case No.U-977

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By D. E. McGaw, Vice President
Detroit, Michigan

E468
Exhibit 41C

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C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued) (C)

h. Rates (Continued)

(3) Extension Stations (Continued)

(a) Monthly Charges (Continued)

(II) Residence Stations (N)

Same charges as applicable for Residence Flat Rate Extension Stations. (N)

(b) Service Connection Charges (N)

(I) Business Stations

Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 2 - Service Connection Charges.

(II) Residence Stations

Service Connection Charges as specified for residence extension stations in Tariff M.P.S.C. No. 2 - Service Connection Charges.

Service Connection Charges will not apply for working stations and residence services which are converted, at the same location, to Business or Residence Stations. (N)

(4) Minimum Charges (R)

A Minimum Monthly Charge equal to the monthly rate of 250 main stations, excluding charges for manual switching equipment, extension stations and mileage charges, is applicable for each system. (R)

(5) Mileage Charges

(a) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located. (R)

(I) Within Base Rate Area - No Mileage Charge.
(II) Outside Base Rate Area - $0.75 per 1/4 mile or fraction. airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary. (R)

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By H. W. Goodman, Vice President
Detroit, Michigan

E469
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

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FILED WITH AUD OF REC. 9-8-61

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

h. Rates (Continued)

(3) Extension Stations (Continued)

(a) Monthly Charges (Continued)

(II) Residence Stations

Same charges as applicable for Residence Flat Rate Extension Stations.

(b) Service Connection Charges

(I) Business Stations

Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges. (T)

(II) Residence Stations

Service Connection Charges as specified for residence extension stations in Tariff M.P.S.C. No. 1 - Service Connection Charges. (T)

Service Connection Charges will not apply for working stations and residence services which are converted, at the same location, to Business or Residence Stations.

(4) Minimum Charges

A Minimum Monthly Charge equal to the monthly rate of 250 main stations, excluding charges for manual switching equipment, extension stations and mileage charges, is applicable for each system.

(5) Mileage Charges

(a) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.

(I) Within Base Rate Area - No Mileage Charge.
(II) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.

Issued under authority of Mich.Pub. Serv. Comm. Order dated Jul. 20, 1961, Case U-653

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By D. E. McGaw, Vice President
Detroit, Michigan

E470
Exhibit 41C

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PRIVATE BRANCH EXCHANGE SERVICE

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C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued) (C)

h. Rates (Continued)

(5) Mileage Charges (Continued)

(b) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone). (N)

(I) Within Base Rate Area

(A) Measured Rate

Airline measurement between the central office in which the Dial Switching Equipment is located and the central office serving the location in which the station is located.

First 1/4 mile or fraction, per month	$3.00
Each Addl. 1/4 mile or fraction, per month	1.00

(B) Flat Rate

Between the central office in which the Dial Switching Equipment is located and a central office serving locations in which the stations are located.

Basic Charge, per month	$100.00
Plus Channel Charge, each channel, per month	8.00

(II) Outside Base Rate Area

Mileage charges as specified in (b) (I) (A) or (B) preceding plus mileage charges specified in (a) (II) preceding.

(c) Extension Stations

Mileage charges as specified for extension stations under Mileage charges in this Tariff. (N)

Issued under authority of Mich.Pub. Serv. Comm. Order dated April 6, 1961, Case U-539

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By H. W. Goodman, Vice President
Detroit, Michigan

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TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued) (C)

h. Rates (Continued)

(6) Central Office Trunks (R)

Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or Zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.042 each. (R)

(7) Special Features (N)

(a) Conference Facilities

Conference arrangements are provided as specified in Tariff (I)
M.P.S.C. No. 2 - Conference Equipment. (I)

(b) Overflow Stations (T)

Arrangements whereby groups of dial stations are associated with overflow station lines. A call to a busy station of a group is transferred to an overflow station line.

Provided at no additional charge. (T)

(c) Transfer (N)

Transfer provides for the transferring of calls from station to station by the P.B.X. attendant.

Provided where facilities are available at no additional charge. (N)

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Issued: April 18, 1961 Effective: April 18, 1961

By H. W. Goodman, Vice President
Detroit, Michigan

E472
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

h. Rates (Continued)

APPROVED BY ____ DATE ____
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(8) Termination Charges (N)

(a) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time service is established.

(b) Termination Charges are not applicable for Residence stations which are disconnected for a period not to exceed 90 days. When such stations are reconnected Service Connection Charges will apply for each station reconnected.

(c) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (a) preceding.

(d) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable. (N)

PROPOSED

E473
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

24101

PRIVATE BRANCH EXCHANGE SERVICE

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FILED WITH [illegible] P.U.C. 4-14-61
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C. DIAL SYSTEMS (Continued)

6. Class E, Type VI - Centrex-CU Dial P.B.X. Systems (N)

a. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

b. The dial switching equipment and the manual switching equipment are located on the customer's premises.

c. The primary features of Centrex service are as follows:

(1) Inward Dialing which permits incoming local and toll calls to be dialed directly to stations of the system.

(2) Outward Dialing which permits dial stations of the system to dial outgoing calls to local and direct distance dialed points.

(3) Station Identification which provides for the recording and identification of stations making outward direct distance dialed toll calls and operator handled toll calls for billing purposes.

(4) Dial Intercommunication between stations.

d. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the rate specified for Extra Listings for business service in this Tariff.

e. Rates

(1) Manual Switching Equipment

(a) Consoles

A console is a cordless type attendant position which provides a means of originating outgoing calls, completing incoming calls to stations associated with the system and transferring central office calls from station to station.

Installation Charge, per position	$200.00
Monthly Charge, per position	150.00

(b) Switchboards

Same charges as specified for switchboards associated with Class E, Type I Dial P.B.X. Systems. (N)

Issued under authority of Mich.Pub.Serv.Comm.Order dated April 6, 1961, Case U-539

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Effective: April 18, 1961

By H. W. Goodman, Vice President
Detroit, Michigan

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

E474
Exhibit 41C

First Revised Sheet 17.7j
Cancels Original Sheet 17.7j

24105

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TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

6. Class E, Type VI - Centrex-CU Dial P.B.X. Systems

a. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

b. The dial switching equipment and the manual switching equipment are located on the customer's premises.

c. The primary features of Centrex service are as follows:

(1) Inward Dialing which permits incoming local and toll calls to be dialed directly to stations of the system.

(2) Outward Dialing which permits dial stations of the system to dial outgoing calls to local and direct distance dialed points.

(3) Station Identification which provides for the recording and identification of stations making outward direct distance dialed toll calls and operator handled toll calls for billing purposes.

(4) Dial Intercommunication between stations.

d. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the rate specified for Extra Listings for business service in this Tariff.

e. Rates

(1) Manual Switching Equipment

(a) Consoles

A console is a cordless type attendant position which provides a means of originating outgoing calls, completing incoming calls to stations associated with the system and transferring central office calls from station to station.

Installation Charge, per position	$200.00
Monthly Charge, per position	150.00

(b) Switchboards

Same charges as specified for switchboards, except Universal Type, associated with Class E, Type I Dial P.B.X. Systems. (T) (T)

Issued under authority of Mich.Pub.Serv.Comm.Order dated Jan.11, 1962, Case No.U-862

Issued. January 22, 1962

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By D. E. McGaw, Vice President
Detroit, Michigan

E475
Exhibit 41C

TELEPHONE EXCHANGE SERVICES
PRIVATE BRANCH EXCHANGE SERVICE

APPROVED DATE
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C. DIAL SYSTEMS (Continued)

6. Class E, Type VI - Centrex-CU Dial P.B.X. Systems (Continued) (N)

e. Rates (Continued)

(2) Main Stations

(a) Monthly Charges

(I) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(II) Measured Service

	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(b) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in This Tariff			
	I	II	III	IV
Service Connection Charge, ea.	$4.50	$5.00	$5.50	$6.00

(N)

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Detroit, Michigan

First Revised Sheet 17.7k
Cancels Original Sheet 17.7k

E476
Exhibit 41C

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TELEPHONE EXCHANGE SERVICES
PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

6. Class E, Type VI - Centrex-CU Dial P.B.X. Systems (Continued)

e. Rates (Continued)

(2) Main Stations

(a) Monthly Charges

(I) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(II) Measured Service

	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(b) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1 (T)			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

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By D. E. McGaw, Vice President
Detroit, Michigan

E477
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

6. Class E, Type VI - Centrex-CU Dial P.B.X. Systems (Continued) (N)

APPROVED BY ________ DATE ________
FILED WITH M P.U.C. 4-14-61
FILED WITH AUD OF ACC. 4-14-61

e. Rates (Continued)

(3) Extension Stations, each

Monthly Charges Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges
Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 2 - Service Connection Charges.

(4) Minimum Charges

A Minimum Monthly Charge equal to the monthly rate of 250 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(5) Mileage Charges

(a) Main Stations located in same central office area in which Dial Switching Equipment is located.

(I) Within Base Rate Area - No Mileage Charge.

(II) Outside Base Rate Area - $0.75 per 1/4 mile or fraction airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.

(b) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone).

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

(c) Extension Stations

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff. (N)

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Detroit, Michigan

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TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

6. Class E, Type VI - Centrex-CU Dial P.B.X. Systems (Continued)

e. Rates (Continued)

(3) Extension Stations, each

Monthly Charges Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges
Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges. (T)

(4) Minimum Charges

A Minimum Monthly Charge equal to the monthly rate of 250 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(5) Mileage Charges

(a) Main Stations located in same central office area in which Dial Switching Equipment is located.

(I) Within Base Rate Area - No Mileage Charge.

(II) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.

(b) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone).

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

(c) Extension Stations.

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

Issued under authority of Mich.Pub.Serv.Comm. Order dated Jul. 20, 1961, Case U-653

Issued: August 25, 1961

Effective: August 25, 1961

By D. E. McGaw, Vice President
Detroit, Michigan

E479
Exhibit 41C

TELEPHONE EXCHANGE SERVICES
PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY DATE
[illegible] 4-14-61
FILED WITH AUD OF REC. 4-14-61

C. DIAL SYSTEMS (Continued)

6. Class E, Type VI - Centrex-CU Dial P.B.X. Systems (Continued) (N)

e. Rates (Continued)

(6) Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

f. Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amount of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the rates in effect at the time service is established.

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable. (N)

Issued under authority of Mich.Pub.Serv.Comm.Order dated April 6, 1961, Case U-539

Issued: April 18, 1961

Effective: April 18, 1961

By H. W. Goodman, Vice President
Detroit, Michigan

E480
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY ________ DATE ________
FILED WITH M.P.S.C. 4-14-61
FILED WITH AUD. OF ACC. 4-14-61

D. TRUNK LINES

1. Class A, Class B, Class C, and Class E, Type III
First and Additional Trunks, per trunk

	Message Rate Service	Flat Rate Service
a. Business Service (excluding Hotels)	Individual Line Business Rate	Individual Line Business Rate plus 50% (see d. below)

For Flat Rate Service in a Locality Rate Area specified in Tariff M.P.S.C. No. 1 - Local Telephone Tariffs, the rate for a P.B.X. trunk is the Individual Line Business Rate in the Locality Rate Area plus 50% of the Individual Line Business Rate in the Base Rate Area of the Exchange (see d. below).

b. Transient, Family and Apartment Hotels

	Message Rate Service	Flat Rate Service
Detroit Zone	Individual Line Business Rate	
Company except Detroit Zone	Individual Line Business Rate	Individual Line Business Rate plus $1.25
c. Residence Service	Individual Line Residence Rate	Individual Line Residence Rate plus 50% (see d. below)

For Flat Rate Service in a Locality Rate Area specified in Tariff M.P.S.C. No. 1 - Local Telephone Tariffs, the rate for a P.B.X. trunk is the Individual Line Residence Rate in the Locality Rate Area plus 50% of the Individual Line Residence Rate in the Base Rate Area of the Exchange (see d. below).

d. The P.B.X. trunk rate determined by adding 50% to the Individual Line Rate is the computed even multiple of 25 cents or, if the computation is uneven, the next lower multiple of 25 cents.

2. Class E, Type I; Class E, Type II; Class E, Type IV (T)
First and Additional Trunks, per trunk.

Monthly Rates apply as determined in 1. above plus $1.50.

3. Class E, Type V and Class E, Type VI (R)
Normal Exchange Central Office Trunks are provided at no additional charge. Foreign Exchange Central Office Trunks are provided at the rates specified in 1. above. (R)

Issued under authority of Mich.Pub.Serv.Comm.Order dated April 6, 1961, Case U-539

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By H. W. Goodman, Vice President
Detroit, Michigan

E481
Exhibit 41C

24112

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY ________ DATE ________
FILED WITH M.P.U.C. 8-17-61
FILED WITH AND [illegible] 8-22-61

D. TRUNK LINES

As specified in Tariff M.P.S.C. No. 1.

PROTECTED

Issued under authority of Mich.Pub.Serv.Comm.Order dated Jul. 20, 1961. Case U-653

Issued: August 25, 1961

Effective: August 25, 1961

By D. E. McGaw, Vice President
Detroit, Michigan

E482
Exhibit 41C

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Eighth Revised Sheet 17.8
Cancels Seventh Revised Sheet 17.8

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

APPROVED BY ______ DATE ______
FILED WITH M.P.U.C. 4-14-61
FILED WITH AUD OF REC. 4-14-61

E. MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS

1. Move or Move with a Change.

a. Class A and Class B Systems.

For the move or move with a change of the switchboard, the charges applicable are the switchboard Installation Charge, Service Connection Charges for trunks and stations, and Installation Charges for tie lines terminating in the system. Installation Charges apply in addition for moves of No. 1-A Key System stations. No additional charge applies for keyless stations moved at the same time.

b. Class C; Class E, Type I; Class E, Type II; Class E, Type V; and Class E, Type VI Systems. (T)

For the move or move with a change of a console, switchboard or apparatus cabinet and/or dial switching equipment, charges based on cost apply. (T)

c. Class E, Type III Systems.

For the move or move with a change of the apparatus cabinet the charges applicable are the system Installation Charge, Service Connection Charges for trunks and stations and Installation Charges for tie lines terminating in the system. A key station Installation Charge applies for the move of each key station or the change of a keyless to a key station. No additional charge applies for the move of keyless stations or the change from key to keyless stations at the same time the apparatus cabinet is moved.

d. Class E, Type IV Systems.

For the move of an Attendant Set:	$25.00
For the move of a Switchboard:	$75.00

The system Installation Charge, Service Connection Charges for Trunks and Stations, and Installation Charges for Tie Lines Terminating in the systems are applicable for:

(1) A move of the apparatus cabinet only.
(2) A move of the apparatus cabinet and the manual switching equipment.
(3) A move of the apparatus cabinet with a change of the manual switching equipment.
(4) A move of the apparatus cabinet with a move and change of the manual switching equipment.

No additional charge applies for keyless stations moved at the same time.

Issued under authority of Mich.Pub.Serv.Comm.Order dated April 6, 1961, Case U-539

Issued: April 18, 1961
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By H. W. Goodman, Vice President
Detroit, Michigan

E483
Exhibit 41C

APPROVED BY ________ DATE ________
FILED WITH M.P.U.C. NOV 28 1962
FILED WITH AUD. OF REC. NOV 29 1962

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

h. Rates

(1) Manual Switching Equipment

(a) Consoles
A console is a cordless type attendant position which provides a means of originating outgoing calls, completing incoming calls to stations associated with the system and transferring central office calls from station to station.

Installation Charge, per position	$200.00
Monthly Charge, per position	150.00

(b) Special Switchboard Positions in the Midland, Michigan exchange.#
Provide multiple appearances of trunks for establishing connections to stations not appearing on the switchboard positions. (Dial stations do not appear on the switchboard positions.) Machine Ringing, Audible Ringing and Idle Trunk Indicating are also provided.

Installation Charge, per position	$150.00
Monthly Charge, per position	100.00

# Not provided on new installations. Provided only on existing installations in service on April 18, 1961.

(c) Universal Type Switchboard (N)

Installation Charge, per position	$250.00
Monthly Charge, per position	175.00 (N)

E484
Exhibit 41C

ADV. #344 FILED WITH M.P.S.C. JUN 22 1964
TRANS. TO COMPT. OPERS. JUN 20 1964

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Third Revised Sheet 17.7e
Cancels Second Revised Sheet 17.7e

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

h. Rates (Continued)

(2) Main Stations (Continued)

(a) (I) (B) Measured Rate Service (Continued)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(II) Residence Stations

i - Non-restricted residence stations are provided at a rate which is $0.10 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service. (C)

ii - Restricted residence stations are provided at a rate of $3.25 each per month.

(b) Service Connection Charges

(I) Business Stations

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(II) Residence Stations (Non-restricted and restricted)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

(3) Extension Stations

(a) Monthly Charges

(I) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

Issued under authority of Mich.Pub.Serv.Comm.Order dated June 4, 1964, Case No.U-1634

Issued: June 20, 1964

Effective: July 1, 1964 *

* The individual flat rate residence rates are effective on each customer's first billing period after June 30, 1964.

By D. E. McGaw, Vice President
Detroit, Michigan

E485
Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C. [illegible]
TRANS. TO COMPT. OPERS. 11-24-64

Michigan Bell Telephone Co. Fourth Revised Sheet 17.7e
TARIFF M.P.S.C. NO. 2 Cancels Third Revised Sheet 17.7e

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

5. Class E, Type V - Centrex-CO Dial P.B.X. Systems (Continued)

h. Rates (Continued)

(2) Main Stations (Continued)

(a) (I) (B) Measured Rate Service (Continued)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(II) Residence Stations

i - Non-restricted residence stations are provided at a rate which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service. (R)

ii - Restricted residence stations are provided at a rate of $3.25 each per month.

(b) Service Connection Charges

(I) Business Stations

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(II) Residence Stations (Non-restricted and restricted)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

(3) Extension Stations

(a) Monthly Charges

(I) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

Issued under authority of Mich.Pub.Serv.Comm. Order dated Nov.5, 1964, Case No.U-1772

Issued: November 20, 1964 Effective: November 25, 1964

By W. C. Patterson, Vice President
Detroit, Michigan

E486

Exhibit 41C

ADV. #228 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

First Revised Sheet 17.19
Cancels Original Sheet 17.19

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I - CO (formerly - Sheet 17.7a) (T)

a. The basic service features provided are: direct inward dialing, direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, and attendant controlled transfer which is provided where facilities are available. (T)

b. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

c. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

d. Centrex I - CO P.B.X. systems are provided for: (T)

(1) Business Service

(2) Combined administrative and residence service for colleges, universities, and similar educational institutions.

e. Location and Classification of Stations

(1) Business Stations

(a) Stations located on the premises of a business customer or in the administrative buildings of a college or university, faculty clubs, student unions, and administrative quarters of dormitories.

(b) Stations located on premises other than the customer's. Such stations are provided only if a separate exchange service is also furnished at the same off-premises locations.

(2) Residence Stations

(a) Nonrestricted.

Nonrestricted stations provide all service features as specified in c. above on stations located in the living quarters (Dormitories, apartments, etc.) of students, faculty members and employees when such quarters are provided by the college or university.

Issued under authority of Mich.Pub.Serv.Comm.Order dated June 10,1965, Case No. U-2000

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By W. C. Patterson, Vice President
Detroit, Michigan

E487
Exhibit 41C

ADV. #928 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I - CO (Continued) (formerly - Sheet 17.7b) (T)

e. Location and Classification of Stations (Continued)

(2) Residence Stations (Continued)

(b) Restricted.

Restricted summer service provides only intercommunicating calls between all stations on the same system. It will be provided for a minimum period of three months during the months of June, July, August and September only. The service is not provided on individual stations but on groups of stations. It is offered only where all rooms of a dormitory floor or all rooms of a floor of a dormitory wing are involved. Further, it is provided only in rooms occupied by other than regularly enrolled college or university students.

(3) Extension Stations

(a) Business extension stations are furnished on premises provided by the customer. When located on premises other than the customer's, a separate exchange service must be furnished at the same off-premises location.

(b) Residence extensions are provided only in the same room suite or apartment as the main station.

f. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided as specified herein:

(1) Business Stations

Department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the rate specified for Extra Listings for business service in this tariff.

(2) Residence Stations

Indented listings under the main listing are not provided. The individual names are listed only in the alphabetical section at the rate specified for Extra Listings for residence service in this tariff.

g. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

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By W. C. Patterson, Vice President
Detroit, Michigan

E488
Exhibit 41C

ADV. #873 FILED WITH M P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I - CO (Continued) (formerly - Sheet 17.7c) (T)

h. Rates

(1) Attendant Facilities (T)

	Installation Charge	Monthly Charge	
(a) Console, per position	$200.00	$150.00	
(b) Switchboard (Universal Type), per position	250.00	175.00	(T)

(c) Special Switchboard Positions in the Midland, Michigan exchange.#

Provide multiple appearances of trunks for establishing connections to stations not appearing on the switchboard positions. (Dial stations do not appear on the switchboard positions.) Machine Ringing, Audible Ringing and Idle Trunk Indicating are also provided.

Installation Charge, per position	$150.00
Monthly Charge, per position	100.00

Not provided on new installations. Provided only on existing installations in service on April 18, 1961.

Issued under authority of Mich.Pub.Serv.Comm.Order dated June 10,1965, Case No. [illegible]

Issued: July 27, 1965 Effective: August 1, [illegible]

By W. C. Patterson, Vice President
Detroit, Michigan

E489
Exhibit 41C

ADV. #898 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Original Sheet 17.22

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I - CO (Continued) (formerly - Sheet 17.7d) (T)

h. Rates (Continued)

(2) Main Stations

(a) Monthly Charges

(I) Business Stations

(A) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$8.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(B) Measured Rate Service	Detroit Zone
First 250 Stations, each.	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

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By W. C. Patterson, Vice President
Detroit, Michigan

E490
Exhibit 41C

ADV. #822 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I - CO (Continued) (formerly - Sheet 17.7e) (T)

h. Rates (Continued)

(2) Main Stations (Continued)

(a) (I) (B) Measured Rate Service (Continued)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(II) Residence Stations

i - Non-restricted residence stations are provided at a rate which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.

ii - Restricted residence stations are provided at a rate of $3.25 each per month.

(b) Service Connection Charges

(I) Business Stations

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(II) Residence Stations (Non-restricted and restricted)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

(3) Extension Stations

(a) Monthly Charges

(I) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

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Detroit, Michigan

E491
Exhibit 41C

ADV. #522 FILED WITH M.P.S.C. 7-22-65
TRANS. TO COMPT. OPERS. 7-29-65

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I - CO (Continued) (formerly - Sheet 17.7e) (T)

h. Rates (Continued)

(2) Main Stations (Continued)

(a) (I) (B) Measured Rate Service (Continued)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(II) Residence Stations

i - Non-restricted residence stations are provided at a rate which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.

ii - Restricted residence stations are provided at a rate of $3.25 each per month.

(b) Service Connection Charges

(I) Business Stations

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(II) Residence Stations (Non-restricted and restricted)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

(3) Extension Stations

(a) Monthly Charges

(I) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

E492
Exhibit 41C

ADV. #998 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-27-65

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Original Sheet 17.25

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I-CO (Continued) (formerly - Sheet 17.7g) (T)

h. Rates (Continued)

(5) Mileage Charges (Continued)

(b) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

(I) Within Base Rate Area

(A) Measured Rate

Airline measurement between the central office in which the Dial Switching Equipment is located and the central office serving the location in which the station is located.

First 1/4 mile or fraction, per month	$[illegible]
Each Add'l. 1/4 mile or fraction, per month	1.00

(B) Flat Rate

Between the central office in which the Dial Switching Equipment is located and a central office serving locations in which the stations are located.

Basic Charge, per month	$100.00
Plus Channel Charge, each channel, per month.	8.00

(II) Outside Base Rate Area

Mileage charges as specified in (b) (I) (A) or (B) preceding plus mileage charges specified in (a) (II) preceding.

(c) Extension Stations

Mileage charges as specified for extension stations under Mileage charges in this Tariff.

Issued under authority of Mich.Pub.Serv.Comm.Order dated June 10,1965, Case No. U-2000

Issued: July 27, 1965

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By W. C. Patterson, Vice President
Detroit, Michigan

E493
Exhibit 41C

ADV. #898 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Original Sheet 17.25

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I-CO (Continued) (formerly - Sheet 17.7g) (T)

b. Rates (Continued)

(5) Mileage Charges (Continued)

(b) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

(I) Within Base Rate Area

(A) Measured Rate

Airline measurement between the central office in which the Dial Switching Equipment is located and the central office serving the location in which the station is located.

First 1/4 mile or fraction, per month	$[illegible]
Each Add'l. 1/4 mile or fraction, per month	1.00

(B) Flat Rate

Between the central office in which the Dial Switching Equipment is located and a central office serving locations in which the stations are located.

Basic Charge, per month	$100.00
Line Channel Charge, each channel, per month	8.00

(II) Outside Base Rate Area

Mileage charges as specified in (b) (I) (A) or (B) preceding plus mileage charges specified in (a) (II) preceding.

(c) Extension Stations

Mileage charges as specified for extension stations under Mileage charges in this Tariff.

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Detroit, Michigan

E494
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ADV. #828 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I-CO (Continued) (formerly - Sheet 17.7i) (T)

h. Rates (Continued)

(8) Termination Charges

(a) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time the service is established. (T)

(b) Termination Charges are not applicable for Residence stations which are disconnected for a period not to exceed 90 days. When such stations are reconnected Service Connection Charges will apply for each station reconnected.

(c) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (a) preceding.

(d) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

E495
Exhibit 41C

ADV. #898 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

8. Centrex I-CO (Continued) (formerly - Sheet 17.7i) (T)

h. Rates (Continued)

(8) Termination Charges

(a) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time the service is established. (T)

(b) Termination Charges are not applicable for Residence stations which are disconnected for a period not to exceed 90 days. When such stations are reconnected Service Connection Charges will apply for each station reconnected.

(c) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (a) preceding.

(d) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

E496
Exhibit 41C

ADV. #891 FILED WITH M.P.S.C. 7-27-65
TRANS. TO COMPT. OPERS. 7-29-65

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Original Sheet 17.29

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

9. Centrex I-CU (Continued) (formerly - Sheet 17.7k) (T)

e. Rates (Continued)

(2) Main Stations

(a) Monthly Charges

(I) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(II) Measured Service

	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(b) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

Issued under authority of Mich.Pub.Serv.Comm.Order dated June 10,1965, Case No. U-2000

Issued: July 27, 1965

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By W. C. Patterson, Vice President
Detroit, Michigan

E497
Exhibit 41C

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Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

Original Sheet [illegible]

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

9. Centrex I-CU (Continued) (formerly - Sheet 17.71) (T)

e. Rates (Continued)

(3) Extension Stations, each

Monthly Charges	
Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges
Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(4) Minimum Charges

A Minimum Monthly Charge equal to the monthly rate of 250 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(5) Mileage Charges

(a) Main Stations located in same central office area in which Dial Switching Equipment is located.

(I) Within Base Rate Area - No Mileage Charge.

(II) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.

(b) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone).

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

(c) Extension Stations.

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

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E498
Exhibit 41C

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TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

9. Centrex I-CU (Continued) (formerly - Sheet 17.7m) (T)

e. Rates (Continued)

(6) Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

f. Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the rates in effect at the time service is established. (T)

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

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Detroit, Michigan

E499
Exhibit 41C

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TRANS. TO COMPT. OPERS. 7-29-65

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

E. SPECIAL FEATURES (Continued)

19. Conference Equipment (formerly - Sheet ~~15.9~~ 13.9 and C.5.h.(7)(a), Sheet 17.7h)

a. Conference Equipment is designed to provide for the simultaneous interconnection of several stations or a central office call and several stations through a private branch exchange.

There are two classifications of this equipment - the Manual Type for use at a manual private branch exchange or at a manual position of a dial private branch exchange, and the Dial Type for use in connection with the dial switching equipment of dial private branch exchange systems where suitable.

b. Conference equipment is furnished at the following rates, subject to transmission limitations:

	Per Month	
(1) Manual Equipment:		
(a) Centrex I-CO Systems equipped with cord type switchboards.		(T)
Four stations or one central office trunk and three stations capacity. Available in the Midland, Michigan exchange and provided only on existing installation in service on April 18, 1961. Not provided on new installations.	$12.50	
(b) Centrex I-CO and Centrex I-CU Systems equipped with consoles.		(T)
Five stations or one central office trunk and four stations capacity.	15.00	
(c) Class B, Class C, Series 100, 160 and Centrex I-CU Systems equipped with cord type switchboards.		(T) (T)
Four stations or one central office trunk and three stations capacity.	7.00	
(2) Dial Equipment:		
(a) Series 100, Class E, Type II and Centrex I-CU Systems.		(T)
Five-Station capacity.	5.00	
Ten-Station capacity.	7.00	
(b) Series 160 System		(T)
Four-Station capacity.	7.00	

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E500
Exhibit 41C

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TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

10. Centrex II - CO (N)

a. The basic service features provided are: direct inward dialing direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, station dial transfer, add-on conference, consultation hold, trunk answer from any station, and attendant controlled transfer.

b. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

c. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

d. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the rate specified for Extra Listings for business service in this tariff.

e. Rates

(1) Attendant Facilities

	Installation Charge	Monthly Charge
(a) Console, per position	$200.00	$150.00
(b) Switchboard (Universal Type), per position	250.00	175.00 (N)

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By W. C. Patterson, Vice President
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E501
Exhibit 41C

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

ADV. #231 FILED WITH M.P.S.C 12-21-65
TRANS. TO COMPT. OPERS. 12-23-65

C. DIAL SYSTEMS (Continued)

10. Centrex II - CO (Continued) (N)

e. Rates (Continued)

(2) Main Stations

(a) Monthly Charges

(I) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$8.50	$9.50	$10.50
Next 250 Stations, each	7.00	7.75	8.75
Next 500 Stations, each	6.75	7.25	8.00
All Addl. Stations, each	6.50	6.75	7.25

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(II) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

(N)

PROTESTED

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Issued: December 23, 1965 Effective: December 27, 1965

By W. C. Patterson, Vice President
Detroit, Michigan

E502
Exhibit 41C

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TRANS. TO COMPT. OPERS. 12-23-65

C. DIAL SYSTEMS (Continued)

10. Centrex II - CO (Continued) (N)

e. Rates (Continued)

(2) Main Stations (Continued)

(a) (II) Measured Rate Service (Continued)

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(b) Service Connection Charges

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(3) Extension Stations

(a) Monthly Charges

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

(b) Service Connection Charges

Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(4) Station instruments are provided in color, as manufactured, at the charges preceding.

(5) Minimum Charges

A Minimum Monthly Charge equal to the monthly rate of 150 main stations, excluding charges for manual switching equipment, extension stations and mileage charges, is applicable for each system. (N)

E503
Exhibit 41C

ADV. #231 FILED WITH M.P.S.C. 12-21-6
TRANS. TO COMPT. OPERS. 12-23-65

C. DIAL SYSTEMS (Continued)

10. Centrex II - CO (Continued) (N)

e. Rates (Continued)

(6) Mileage Charges

(a) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.

(I) Within Base Rate Area - No Mileage Charge

(II) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.

(b) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

(I) Within Base Rate Area

(A) Measured Rate

Airline measurement between the central office in which the Dial Switching Equipment is located and the central office serving the location in which the station is located.

First 1/4 mile or fraction, per month	$3.00
Each Addl. 1/4 mile or fraction, per month	1.00

(B) Flat Rate

Between the central office in which the Dial Switching Equipment is located and a central office serving locations in which the stations are located.

Basic Charge, per month	$100.00
Plus Channel Charge, each channel, per month	8.00

(II) Outside Base Rate Area

Mileage charges as specified in (b) (I) (A) or (B) preceding plus mileage charges specified in (a) (II) preceding.

(c) Extension Stations

Mileage charges as specified for extension stations under Mileage charges in this Tariff. (N)

E504

Exhibit 41C

ADV. #27 FILED WITH M.P.S.C. [illegible]

TRANS. TO COMPT. OFLS. 12-23-65

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

10. Centrex II - CO (Continued) (N)

e. Rates (Continued)

(7) Central Office Trunks

Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or Zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.042 each. (N)

PROTECTED

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By W. C. Patterson, Vice President
Detroit, Michigan

E505
Exhibit 41C

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TRANS. TO COMPL. OPERS. 12-23-65

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

10. Centrex II-CO (Continued) (N)

e. Rates (Continued)

(8) Termination Charges

(a) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time the service is established.

(b) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (a) preceding.

(c) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable. (N)

E506
Exhibit 41C

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TRANS. TO COMPT. OPERS. 12-23-65

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

11. Centrex II-CU (N)

a. The basic service features provided are: direct inward dialing, direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, station dial transfer, add-on conference, consultation hold, trunk answer from any station, and attendant controlled transfer.

b. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

c. The dial switching equipment and the attendant facilities are located on the customer's premises.

d. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the rate specified for Extra Listings for business service in this Tariff.

e. Rates

(1) Attendant Facilities

	Installation Charge	Monthly Charge
(a) Consoles, per position	$200.00	$150.00
(b) Switchboards		
(I) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems.		
(II) Universal Type, per position	$250.00	$175.00

(N)

E507
Exhibit 41C

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

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TRANS. TO COMPT. OPERS. 12-23-65

Original Sheet 17.31h

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

11. Centrex II-CU (Continued) (N)

e. Rates (Continued)
(2) Main Stations

(a) Monthly Charges
(I) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Groups D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$8.30	$9.30	$10.25
Next 250 Stations, each	6.80	7.55	8.50
Next 500 Stations, each	6.55	7.05	7.75
All Addl. Stations, each	6.30	6.55	7.00

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(II) Measured Service

	Detroit Zone
First 250 Stations, each	$9.50
Next 250 Stations, each	7.75
Next 500 Stations, each	6.75
All Addl. Stations, each	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(b) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

(N)

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E508

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TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

C. DIAL SYSTEMS (Continued)

11. Centrex II-CU (Continued) (N)

e. Rates (Continued)

(3) Extension Stations, each

Monthly Charges	
Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges

Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(4) Station instruments are provided in color, as manufactured, at the charges preceding.

(5) Minimum Charges

A Minimum Monthly Charge equal to the monthly rate of 150 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(6) Mileage Charges

(a) Main Stations located in same central office area in which Dial Switching Equipment is located.

(I) Within Base Rate Area - No Mileage Charge.

(II) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.

(b) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone).

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

(c) Extension Stations.

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff. (N)

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E509

Exhibit 41C

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TRANS. TO COMPT. OPERS. 12-23-65

C. DIAL SYSTEMS (Continued)

11. Centrex II-CU (Continued) (N)

e. Rates (Continued)

(7) Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

(8) Termination Charges

(a) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the rates in effect at the time service is established.

(b) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (a) preceding.

(c) Where a contract is cancelled before installation is completed a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable. (N)

E510
Exhibit 41C

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TRANS. TO COMPT. OPERS. 12-23-65

Michigan Bell Telephone Co.
TARIFF M.P.S.C. NO. 2

First Revised Sheet 17.55
Cancels Original Sheet 17.55

TELEPHONE EXCHANGE SERVICES

PRIVATE BRANCH EXCHANGE SERVICE

E. SPECIAL FEATURES (Continued)

19. Conference Equipment

a. Conference Equipment is designed to provide for the simultaneous interconnection of several stations or a central office call and several stations through a private branch exchange.

There are two classifications of this equipment - the Manual Type for use at a manual private branch exchange or at a manual position of a dial private branch exchange, and the Dial Type for use in connection with the dial switching equipment of dial private branch exchange systems where suitable.

b. Conference equipment is furnished at the following rates, subject to transmission limitations:

	Per Month	
(1) Manual Equipment:		
(a) Centrex I-CO Systems equipped with cord type switchboards		
Four stations or one central office trunk and three stations capacity. Available in the Midland, Michigan exchange and provided only on existing installation in service on April 18, 1961. Not provided on new installations.	$12.50	
(b) Centrex I and Centrex II Systems equipped with consoles.		(N)
Five stations or one central office trunk and four stations capacity.	15.00	
(c) Class B, Class C, Series 100, 160 and Centrex I-CU Systems equipped with cord type switchboards.		
Four stations or one central office trunk and three stations capacity.	7.00	
(2) Dial Equipment:		
(a) Series 100, Class E, Type II, Centrex I-CU and Centrex II-CU Systems.		(T) (N)
Five-Station capacity.	5.00	
Ten-Station capacity.	7.00	
(b) Series 160 System		
Four-Station capacity.	7.00	

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E511
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Tariff M.P.S.C. No. 2

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Original Sheet 39

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (FORMERLY SHEET 17.19)

1. The basic service features provided are: direct inward dialing, direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, and attendant controlled transfer which is provided where facilities are available.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

4. Centrex I - CO P.B.X. systems are provided for:
   a. Business Service
   b. Combined administrative and residence service for colleges, universities, and similar educational institutions.

5. Location and Classification of Stations
   a. Business Stations
      (1) Stations located on the premises of a business customer or in the administrative buildings of a college or university, faculty clubs, student unions, and administrative quarters of dormitories.
      (2) Stations located on premises other than the customer's. Such stations are provided only if a separate exchange service is also furnished at the same off-premises locations.
   b. Residence Stations
      (1) Nonrestricted.
      Nonrestricted stations provide all service features as specified in 1. preceding on stations located in the living quarters (dormitories, apartments, etc.) of students, faculty members and employees when such quarters are provided by the college or university.
      (2) Restricted.
      Restricted summer service provides only intercommunicating calls between all stations on the same system. It will be provided for a minimum period of three months during the months of June, July, August and September only. The service is not provided on individual stations but on groups of stations. It is offered only where all rooms of a dormitory floor or all rooms of a floor of a dormitory wing are involved. Further, it is provided only in rooms occupied by other than regularly enrolled college or university students.
   c. Extension Stations
      (1) Business extension stations are furnished on premises provided by the customer. When located on premises other than the customer's, a separate exchange service must be furnished at the same off-premises location.
      (2) Residence extensions are provided only in the same room, suite or apartment as the main station.

6. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided as specified herein:
   a. Business Stations
   Department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this tariff.
   b. Residence Stations
   Indented listings under the main listing are not provided. The individual names are listed only in the alphabetical section at the charge specified for Extra Listings for residence service in this tariff.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED FEB. 10, 1966, CASE NO. U-2233

ISSUED: FEBRUARY 25, 1966

EFFECTIVE: MARCH 1, 1966

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E512

Exhibit 41C

ADV. #941 FILED WITH M.P.S.C. FEB 24 1966

TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges 1221

	Installation Charge	Monthly Charge
a. Attendant Facilities		
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

(3) Special Switchboard Positions in the Midland, Michigan exchange.#

Provide multiple appearances of trunks for establishing connections to stations not appearing on the switchboard positions. (Dial stations do not appear on the switchboard positions.) Machine Ringing, Audible Ringing and Idle Trunk Indicating are also provided.

Installation Charge, per position	$150.00
Monthly Charge, per position	100.00

# Not provided on new installations. Provided only on existing installations in service on April 18, 1961.

b. Main Stations 1722

(1) Monthly Charges - Business Stations

(a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$8.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Monthly Charges - Residence Stations 1723

(a) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.

(b) Restricted residence stations are provided at a charge of $3.25 each per month.

(3) Service Connection Charges

(a) Business Stations

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(Continued)

E513
Exhibit 41C

ADV. #947 FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

4. CENTREX I - CO SYSTEMS (Continued)

8. Charges

b. Main Stations

(3) Service Connection Charges

(b) Residence Stations (Non-restricted and restricted)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

c. Extension Stations

(1) Monthly Charges

(a) Business Stations 17.23

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

(b) Residence Stations 17.25 ✓

Same charges as applicable for Residence Flat Rate Extension Stations.

(2) Service Connection Charges

(a) Business Stations

Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(b) Residence Stations

Service Connection Charges as specified for residence extension stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

d. Minimum Charges

A Minimum monthly charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations and mileage charges, is applicable for each system.

e. Mileage Charges

(1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.

(a) Within Base Rate Area - No Mileage Charge

(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.

(2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone). 17.25

(a) Within Base Rate Area:

(i) Measured Rate

Airline measurement between the central office in which the Dial Switching Equipment is located and the central office serving the location in which the station is located.

First 1/4 mile or fraction, per month	$3.00
Each Addl. 1/4 mile or fraction, per month	1.00

(ii) Flat Rate

Between the central office in which the Dial Switching Equipment is located and a central office serving locations in which the stations are located.

Basic Charge, per month	100.00
Plus Channel Charge, each channel, per month	8.00

(b) Outside Base Rate Area

Mileage charges as specified in (2)(a)(i) or (ii) preceding plus mileage charges specified in (1)(b) preceding.

(3) Extension Stations

Mileage charges as specified for extension stations under Mileage charges in this Tariff.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED FEB. 10, 1966, CASE NO. [illegible]

ISSUED: FEBRUARY 25, 1966

EFFECTIVE: MARCH 1, 19[illegible]

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E514
Exhibit 41C

ADV. #949 FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPT. OPERS. FEB 23 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges
   f. Central Office Trunks 17.26
   Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

   Company Except Detroit Zone
   Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or Zone from which service is provided.

   Detroit Zone
   Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.042 each.

   g. Special Features
   (1) Overflow Stations
   Arrangements whereby groups of dial stations are associated with overflow station lines. A call to a busy station of a group is transferred to an overflow station line.

   Provided at no additional charge.

   h. Initial Contract Period and Termination Charges 17.27
   (1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time the service is established.
   (2) Termination Charges are not applicable for Residence stations which are disconnected for a period not to exceed 90 days. When such stations are reconnected Service Connection Charges will apply for each station reconnected.
   (3) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.
   (4) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable

B. CENTREX I - CU SYSTEMS (FORMERLY SHEET 17.28)

1. The basic service features provided are: direct inward dialing, direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, and attendant controlled transfer.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant facilities are located on the customer's premises.

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

(Continued)

E515

Exhibit 41C

ADV. #249 FILED WITH M.P.S.C. FEB 24 1966

TRANS. TO COMPT. OPERS. FEB 28 1966

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges
   a. Attendant Facilities

	Installation Charge	Monthly Charge
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems.		
(b) Universal Type, per position	250.00	175.00

   b. Main Stations 1729
      (1) Monthly Charges
         (a) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia' Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

         (b) Measured Service

	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

      (2) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

   c. Extension Stations, each 1730
      (1) Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

      (2) Service Connection Charges
         Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

   d. Minimum Charges
      A Minimum Monthly Charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(Continued)

E516

Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CO SYSTEMS (Continued)

5. Charges
   - e. Mileage Charges
     - (1) Main Stations located in same central office area in which Dial Switching Equipment is located:
       - (a) Within Base Rate Area - No Mileage Charge.
       - (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.
     - (2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone).

       Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.
     - (3) Extension Stations

       Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

   - f. Central Office Trunks

     Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

     Company Except Detroit Zone

     Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

     Detroit Zone

     Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

   - g. Initial Contract Period and Termination Charges
     - (1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established.
     - (2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.
     - (3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

C. CENTREX II - CO SYSTEMS. (FORMERLY SHEET 17.31A)

1. The basic service features provided are: direct inward dialing, direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, station dial transfer, add-on conference, consultation hold, trunk answer from any station, and attendant controlled transfer.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED FEB. 10, 1966, CASE NO. U-[illegible]

ISSUED: FEBRUARY 25, 1966 EFFECTIVE: MARCH 1, 1966

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E517
Exhibit 41C

SV. #999 FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this tariff.

5. Charges

a. Attendant Facilities

	Installation Charge	Monthly Charge
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations

(1) Monthly Charges

(a) Flat Rate Service

	Rate Groups A, B, C, and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$8.50	$9.50	$10.50
Next 250 Stations, each	7.00	7.75	8.75
Next 500 Stations, each	6.75	7.25	8.00
All Addl. Stations, each	6.50	6.75	7.25

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

c. Extension Stations

(1) Monthly Charges

Flat Rate Service, each	$3.50
Measured Service, each	3.25

(2) Service Connection Charges are as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(Continued)

E518
Exhibit 41C

ADV. #911 FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

5. Charges

d. Station instruments are provided in color as manufactured at the charges preceding.

e. Minimum Charges:

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations and mileage charges, is applicable for each system.

f. Mileage Charges 12.74c

(1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located:

(a) Within Base Rate Area - No Mileage Charge

(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.

(2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (same exchange or zone).

(a) Within Base Rate Area:

(A) Measured Service -

Airline measurement between the central office in which the Dial Switching Equipment is located and the central office serving the location in which the station is located:

First 1/4 mile or fraction, per month	$3.00
Each Addl. 1/4 mile or fraction, per month	1.00

(B) Flat Rate Service -

Between the central office in which the Dial Switching Equipment is located and a central office serving locations in which the stations are located:

Basic Charge, per month	$100.00
Plus Channel Charge, each channel, per month	8.00

(b) Outside Base Rate Area

Mileage charges as specified in (2) (a) preceding plus mileage charges specified in (1) (b) preceding.

(3) Extension Stations:

Mileage charges as specified for extension stations under Mileage Charges in this Tariff.

g. Central Office Trunks 12.31c

Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone:

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone:

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.042 each.

h. Initial Contract Period and Termination Charges 12.31d

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the charges in effect at the time the service is established.

(Continued)

E519

Exhibit 41C

ADV. #9[illegible] FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPL. OPERS. ~~FEB 25 1966~~

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

5. Charges
   h. Initial Contract Period and Termination Charges
      (2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.
      (3) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

D. CENTREX II - CU SYSTEMS **(FORMERLY SHEET 17.31G)**

1. The basic service features provided are: direct inward dialing, direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, station dial transfer, add-on conference, consultation hold, trunk answer from any station, and attendant controlled transfer.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant facilities are located on the customer's premises.

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

5. Charges

	Installation Charge	Monthly Charge
a. Attendant Facilities		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems.		
(b) Universal Type, per position	$250.00	$175.00

b. Main Stations 1134
   (1) Monthly Charges
      (a) Flat Rate Service

	Rate Groups A, B, C, and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Groups D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$8.30	$9.30	$10.25
Next 250 Stations, each	6.80	7.55	8.50
Next 500 Stations, each	6.55	7.05	7.75
All Addl. Stations, each	6.30	6.55	7.00

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED FEB. 10, 1966, CASE NO. U-2233

ISSUED: FEBRUARY 25, 1966 EFFECTIVE: MARCH 1, 1966

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E520

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. [illegible]

ADV. #99 FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPL. OPERS. FEB 28 1966

Original Sheet [illegible]

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges

b. Main Stations

(1) Monthly Charges

(b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.50
Next 250 Stations, each	7.75
Next 500 Stations, each	6.75
All Addl. Stations, each	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

c. Extension Stations, each ,7.31

Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges are as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

d. Station instruments are provided in color as manufactured at the charge preceding.

e. Minimum Charges

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

f. Mileage Charges

(1) Main Stations located in same central office area in which Dial Switching Equipment is located:

(a) Within Base Rate Area - No Mileage Charge.

(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.

(2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone):

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

(3) Extension Stations:

Mileage charges as specified for P.B.X. stations under Mileage Charges in this Tariff.

g. Central Office Trunks [illegible]

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone:

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED FEB. 10, 1966, CASE NO. U-2233

ISSUED: FEBRUARY 25, 1966

EFFECTIVE: MARCH 1, 1966

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E521

Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C FEB 24 1966
TRANS. TO COMPT. OPERS. FEB 28 1966

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges

   g. Central Office Trunks

      Detroit Zone:

      Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

   h. Initial Contract Period and Termination Charges 1.21¢

      (1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established.

      (2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

      (3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

E522

Exhibit 41C

ADV. #7?? FILED WITH M.P.S.C. FEB 24 1966
FEB 28 1966
TRANS. TO COMM. OPERS

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS (FORMERLY SHEET 17.32)

A. MOVES

1. Class A and Class B P.B.X. Systems:
   For the move of the attendant facilities, the charges applicable are the attendant facilities installation charge, service connection charges for all trunks and stations, main and extension, and installation charges for all tie lines and WATS lines terminating in the system. No additional charge applies for keyless stations moved at the same time.

2. Series 40 (20-40 Dial Pak) P.B.X. Systems:
   a. For a move of the apparatus cabinet, the basic service installation charge is applicable.
   b. For a move of the attendant facility, the installation charge for a Call Director is applicable.

3. Series 75 P.B.X. Systems:
   For the move of the apparatus cabinet the charges applicable are the system installation charge, service connection charges for all trunks and stations, main and extension, and installation charges for all tie lines and WATS lines terminating in the system. A key station installation charge applies for the move of each key station or the change of a keyless to a key station. No additional charge applies for the move of keyless stations or the change from key to keyless stations at the same time the apparatus cabinet is moved.

4. Series 90 (Guest Dial Pak) P.B.X. Systems:
   a. For the move of the apparatus cabinet only or a move of the apparatus cabinet and the attendant facility, the basic service installation charge and service connection charges for all trunks and stations, main and extension, are applicable.
   b. For a move of the attendant facility only: $30.00
   c. For the move of a station: $ 5.00

5. Series 160 P.B.X. Systems: 17.33
   a. For the move of an Attendant Set: $25.00
   b. For the move of a Switchboard: $75.00
   c. The system installation charge, service connection charges for all trunks and stations, main and extension, and installation charges for all tie lines and WATS lines terminating in the system are applicable for:
      (1) A move of the apparatus cabinet only.
      (2) A move of the apparatus cabinet and the attendant facilities.
      (3) A move of the apparatus cabinet with a change of the attendant facilities.
      (4) A move of the apparatus cabinet with a move and a change of the attendant facilities.
      (5) No additional charge applies for keyless stations moved at the same time.

6. Class C, Series 100, Series 200, Series 300, Centrex I, and Centrex II P.B.X. Systems:
   a. Attendant facilities only:
      Charges based on cost not to exceed the service connection charges for all trunks and stations, main and extension and the installation charges for all tie lines, WATS lines, and attendant facilities associated with the system after the move. The existing contract will be continued. If the move charge is equal to the service connection charges and installation charges, no additional charge applies for keyless stations moved at the same time.
   b. Dial switching equipment only or dial switching equipment and attendant facilities:
      Termination Charges are applicable to the entire system if the contract has not expired. Also applicable are the service connection charges for all trunks and stations, main and extension, and the installation charges for all tie lines, WATS lines, and attendant facilities associated with the system after the move. No additional charge applies for keyless stations moved at the same time. A new contract is applicable for the system as provided at the new location.

E523
Exhibit 41C FEB 24 1966

FILED WITH M.P.S.C. 2-24-66
TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS (FORMERLY SHEET 17.34)

B. CHANGES

1. Manual P.B.X. Systems:
   a. Change from a Manual P.B.X. System to another Manual P.B.X. System or to a Dial P.B.X. System (without a move of the attendant facility) or
   b. Change from one type attendant facility to another type attendant facility on the same system (without a move):

      Termination charges are applicable if the contract has not expired. The charge applicable is the installation charge for the new system or attendant facility; service connection charges for all trunks and stations, main and extension, added at the time of the change; and installation charges for all tie lines and WATS lines added at the time of the change. A new contract is applicable for the new system or attendant facility.

2. Dial P.B.X. Systems:
   a. Change from one dial P.B.X. system to another dial P.B.X. system or to a manual P.B.X. system (without move of dial switching equipment and/or attendant facilities):

      Termination Charges are applicable to the entire system if the contract has not expired. Also applicable are the system installation charges where specified, service connection charges for all trunks and stations, main and extension, associated with the new system and the installation charges for all tie lines, WATS lines and attendant facilities associated with the new system. No additional charge applies for the move of keyless stations at the same time. A new contract is applicable for the new system. The following exception will apply:

      If a change is made from one system to another among the Series 100, Series 200, Series 300, Centrex I - CU and Centrex II - CU systems and the dial switching equipment and attendant facilities are retained at the same location and the dial switching equipment is modified, the charge will be based on cost not to exceed the service connection charges for all trunks and stations, main and extension, associated with the new system and the installation charges for all tie lines, WATS lines, and attendant facilities associated with the new system. No termination charge is applicable unless the attendant facilities are changed in which case termination charges apply for the discontinued attendant facilities. A new contract is applicable for the new system. If the charge applicable for the change equals the full service connection and installation charges, no additional charge applies for the move of keyless stations at the same time.
   b. Change of dial switching equipment without a change from one Series to another:
      (1) To increase the station capacity of the system as required by growth:

      No charge is applicable. Existing contract will be continued.

      (2) For reasons other than growth:

      Series 200, Series 300, Centrex I - CU and Centrex II - CU Systems:

      Termination Charges are applicable to the entire system if the contract has not expired. Also applicable are the service connection charges for all trunks and stations, main and extension, associated with the new system and the installation charges for all tie lines, WATS lines, and attendant facilities associated with the new system. No additional charge applies for the move of keyless stations at the same time. A new contract is applicable for the new system.

      (3) To change service features:

      Series 100 Systems -

      (a) To change from a system without attendant direct station selection to a system with attendant direct station selection: $150.00. The existing contract will be continued.

      (b) To change from a system with attendant direct station selection to a system without attendant direct station selection, no charge is applicable. The existing contract will be continued.

(Continued)

E524

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. [illegible]

#922 FILED WITH M.P.S.C. FEB 24 1966

Original Sheet 40.2

TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS

B. CHANGES (Continued)

c. Change from one attendant facility to another: 17.36

(1) Series 40 (20-40 Dial Pak)
Change charges as applicable for Call Directors.

(2) Series 90 (Guest Dial Pak)
For a change in the color of an attendant facility: $30.00
For a change in the color of a station instrument, the regular change of instrument charge is applicable.

(3) Series 160

(a) For a change from a Console to a Key Attendant Set, Key Attendant Set to a Console, or from a Switchboard to a Console or Key Attendant Set: $25.00

(b) For a change from a Console or Key Attendant Set to a Switchboard: $75.00

(c) For a change in color of a Console: $25.00

(d) For a change of a console with direct station selection to another console with direct station selection to increase or decrease capacity, no charge is applicable. The existing contract will be continued.

(e) For a change of a console without direct station selection to another console without direct station selection to increase or decrease capacity, no charge is applicable. The existing contract will be continued.

(4) Series 100, Series 200, Series 300, Centrex I and Centrex II: 17.37
Termination charges are applicable for the attendant facility if the contract has not expired. Also applicable are charges based on cost not to exceed the service connection charges for all trunks and stations, main and extension, on the system and the installation charges for all tie lines, WATS lines and attendant facilities on the system. A new contract is applicable for the new attendant facility. If the charge applicable for the change equals the full service connection and installation charges, no additional charge applies for the move of keyless stations at the same time. The following exception will apply:

For a change of a console with direct station selection to another console with direct station selection to increase or decrease capacity, no charge is applicable. The existing contract will be continued.

C. MOVE AND CHANGE AT THE SAME TIME (FORMERLY SHEET 17.37)

1. Class A and Class B Systems:
The charges applicable are the installation charges for the new attendant facility, the service connection charges for all trunks and stations, main and extension, and the installation charges for all tie lines, and WATS lines associated with the new attendant facility. No additional charge applies for keyless stations moved at the same time.

2. Series 40 (20-40 Dial Pak)
Attendant Facilities:
The installation charge for a Call Director is applicable.

3. Series 90 (Guest Dial Pak)

a.	Attendant facilities only:	$30.00
b.	Stations:	$ 5.00 each

4. Series 160

a. Attendant Facilities only.

(1) Change to a console or a key attendant set with a move:	$25.00
(2) Change to a switchboard with a move:	$75.00

b. Dial switching equipment only or dial switching equipment and attendant facilities:
The charge applicable is the system installation charge, service connection charges for all trunks and stations, main and extension, associated with the system at the new location, and installation charges for all tie lines and WATS lines associated with the system at the new location. No additional charge applies for keyless stations moved at the same time.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED FEB. 10, 1966, CASE NO. U-2233

ISSUED: FEBRUARY 25, 1966

EFFECTIVE: MARCH 1, 1966

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E525

Exhibit 41C

ADV #[illegible] FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO DEPT. OPERS FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS

C. MOVE AND CHANGE AT THE SAME TIME (Continued)

5. Class C, Series 100, Series 200, Series 300, Centrex I and Centrex II: 17-35

   a. Attendant Facilities only.
   Termination charges are applicable for the attendant facilities if the contract has not expired. Also applicable are charges based on cost not to exceed the service connection charges for all trunks and stations, main and extension, associated with the system and the installation charges for all tie lines, WATS lines and attendant facilities associated with the system. A new contract is applicable for the new attendant facilities. When the charge applicable for the move and change equals the full service connection and installation charges, no additional charge applies for the move of keyless stations at the same time.

   b. Dial switching equipment only or dial switching equipment and attendant facilities.
      (1) Except as provided in (2) following, termination charges are applicable to the entire system if the contract has not expired. Also applicable are the service connection charges for all trunks and stations, main and extension, associated with the system at the same location and the installation charges for all tie lines, WATS lines and attendant facilities associated with the system at the same location. No additional charge applies for the move of keyless stations at the same time. A new contract is applicable for the system at the new location.
      (2) For a move and a change of dial switching equipment within a Series to increase the Station capacity of the system as required by growth, no charge is applicable. Existing contract will be continued.

6. Change in type of system with a move of either attendant facilities and/or dial switching equipment:
Termination charges are applicable to the entire system if the contract has not expired. Also applicable are the service connection charges for all trunks and stations, main and extension, associated with the new system and the installation charges for all tie lines, WATS lines and attendant facilities associated with the new system. No additional charge applies for the move of keyless stations at the same time. A new contract is applicable for the new system.

E526
Exhibit 41C

ADV. #222 FILED WITH M.P.S.C. FEB 24 1966
TRANS. TO COMPT. OPERS. FEB 28 1966

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS (FORMERLY SHEET 17.39)

1. Toll diversion arrangements are available to divert station users from long distance and multiunit access codes as indicated herein.

2. Type I (Combined Message Registers and Toll Diversion):
   a. Where facility conditions permit, Message Registers and Toll Diversion are available only as combined features with Series 100, 200, 300, and Class E, Type II dial P.B.X. Systems.
   b. Message Registers are located on the premises of the customer and one register is associated with each station so equipped to record the number of one-unit calls placed.
   c. The feature diverts all calls other than one-unit calls to the P.B.X. operator for handling. Calls are normally diverted by means of a recorded announcement which directs the station user to dial "operator" to place the call. All multiunit calls, long distance calls and calls to the Telephone Company local operator are diverted. If the P.B.X. is equipped with Toll Terminals, long distance calls may be placed directly by the station user by dialing a preset code.
   d. Charges:
      (1) The charges indicated below are in addition to all charges applicable to the class and type of telephone service with which the features are associated and for any miscellaneous services provided.

	Installation Charge	Monthly Charge
(2) Common Equipment, each System	$200.00	$80.00
(3) Each P.B.X. Station equipped with Message Register	5.00	.50
(4) Outgoing Trunks equipped for Toll Diversion, each	15.00	8.00

(5) Initial Contract Period and Termination Charges

(a) For all services contracted for on or after March 1, 1965 the following applies:
The initial contract period is five years in the same building starting with the date service is established. Termination Charges will apply to the Common Equipment, the Message Registers associated with P.B.X. Stations and the Toll Diversion features associated with Outgoing Trunks, as specified in the initial contract. In the event of complete discontinuance of the service prior to the expiration of the contract period, a Termination Charge is applicable and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the charges in effect at the time the contract period began.

Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in the preceding paragraph.

Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled charges for the 5-year period, shall be applicable.

(b) For all service contracted for prior to March 1, 1965 the following applies:
The initial contract period is five years in the same building, starting with the date service is established. The termination charge applicable when the contract is terminated before the end of the contract period is 1/60th of the termination charge base multiplied by the number of months remaining in the period. The termination charge base is the unrecoverable investment plus removal costs.

(6) Moves
For a move of a cabinet housing the message registers or a move of the common equipment, charges Based on Cost apply.

(Continued)

E527

Exhibit 41C

V. #997 FILED WITH M.P.S.C. FEB 24 1966

TRANS. TO COMPL. OPERS. FEB 28 1966

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Original Sheet 41.1

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS (Continued)

3. Type II: 11.41
   a. Where facility conditions permit, Type II Toll Diversion is available with Series 100, 200, 300 and Class E, Type II dial P.B.X. systems.
   b. The service may be arranged to divert stations from all long distance and multiunit codes or from certain long distance and multiunit codes as specified by the customer.
   c. When a station user attempts to dial an excluded code the call will be diverted. Depending upon circumstances, and facilities available, the call will be diverted to a distinctive tone, a recorded announcement, or directly to the P.B.X. operator.
   d. When the customer desires to divert different groups of stations from different codes, a separate unit is required for each different group of codes and a different group of trunks is associated with each code diverting unit.
   e. Charges:
      (1) The charges indicated below are in addition to all charges applicable to the class and type of telephone service with which the features are associated and for any miscellaneous services provided.
      (2) Monthly Charges
          Each group of trunks associated with the same Diverting Unit: 16

First 25 trunks or less	$150.00
Next 75 trunks, each	6.00
Additional trunks in excess of 100, each	4.00

      (3) Installation Charges

Trunks associated with a Diverting Unit, each	5.00

      (4) Initial Contract Period and Termination Charges 11.42
          (a) A Termination Charge Base of $2,500.00 applies for each group of 25 trunks or less.
          (b) The initial contract period is for three years in the same building, starting with the date service is established. The termination charge reduces 1/36 for each month of service.
          (c) Where only a portion of the service is discontinued, termination charges are applicable whenever the total number of trunks is reduced to 25 trunks or a multiple thereof. When termination charges are applied to a group of trunks, the date on which the first trunk of the group was equipped for toll diversion will be used in computing charges for the entire group.
      (5) Moves
          For a move of diverting equipment, charges Based on Cost are applicable.

4. Type III: 11.42
   a. Type III Toll Diversion is available with Centrex I and Centrex II P.B.X. stations.
   b. Two classes of toll diversion are available: (1) to divert all long distance and multiunit calls and (2) to divert all long distance calls only.
   c. When a station equipped with toll diversion dials a restricted code, the call will be diverted to a distinctive tone to indicate that such calls cannot be dialed from that station.
   d. The charges specified herein are not applicable to those specific stations arranged for toll diversion as of October 15, 1962 for systems installed prior to April 18, 1961.
   e. Charges
      (1) The charges indicated below are in addition to the regular charges for stations.
      (2) Centrex I and Centrex II stations, excluding Centrex I-CO residence stations:

	Per Month
Up to and including 100 stations equipped for toll diversion	$50.00
Additional Stations, each	0.50

If the customer has both classes of toll diversion as described in b. preceding, the above charges apply for each class of toll diversion.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED FEB. 10, 1966, CASE NO. U-22[illegible]

ISSUED: FEBRUARY 25, 1966

EFFECTIVE: MARCH 1, 1966

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E528
Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #826 FILED WITH M.P.S.C. 6-27-66
TRANS. TO COMPT. OPERS. 6-28-66

First Revised Sheet 39.2
Cancels Original Sheet 39.2

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges

b. Main Stations
  (3) Service Connection Charges
    (b) Residence Stations (Non-restricted and restricted)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

c. Extension Stations
  (1) Monthly Charges
    (a) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

    (b) Residence Stations

Same charges as applicable for Residence Flat Rate Extension Stations.

  (2) Service Connection Charges
    (a) Business Stations

Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

    (b) Residence Stations

Service Connection Charges as specified for residence extension stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

d. Minimum Charges

A minimum monthly charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system. (T

e. Interbuilding Channel Charges (T)
  (1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.
    (a) Within Base Rate Area - No Mileage Charge
    (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.
  (2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

	Per Channel, Per Month	
(a) Option I		(T
(i) Detroit Zone		(T
(A) Terminals in same zone rate area	$ 5.00	(T
(B) Terminals in adjacent zone rate area	10.00	
(C) Terminals in nonadjacent zone rate areas	15.00	
(ii) Company except Detroit Zone (FORMERLY E(2)(A) AND (B))	5.00	(T

    (b) Option II (T
      (i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located (T

(A) Basic Charge, per month	$100.00
(B) Plus Channel Charges, each channel, per month	8.00

Issued under authority of Mich. Pub. Serv. Comm. order dated Jun. [illegible], 1966, Case No. U-[illegible]

Issued: June 28, 1966 Effective: July 1, 1966

By W. C. Patterson, Vice President
Detroit, Michigan

E529

Exhibit 41C

ADV. #766 FILED WITH M.P.S.C. 6-22-66
TRANS. TO COMPT. OPERS. 6-28-66

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges

e. Channel Charges (T)

(1) Main Stations located in same central office area in which Dial Switching Equipment is located:

(a) Within Base Rate Area - No Mileage Charge.

(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.

(2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone).

Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff. (T)

(3) Extension Stations

Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff. (FORMERLY SHEET 39.2) (T)

f. Central Office Trunks

Normal Exchange central office trunks are porvided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

g. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established.

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss in equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

C. CENTREX II - CO SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, station identification, dial intercommunication between stations, station hunting, station restriction, station dial transfer, add-on conference, consultation hold, trunk answer from any station, and attendant controlled transfer.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

(Continued)

E530
Exhibit 41C

ADV. #966 FILED WITH M.P.S.C. 6-22-66
TRANS. TO COMPT. OPERS. 6-28-66

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

5. Charges

d. Station instruments are provided in color as manufactured at the charges preceding.

e. Minimum Charges:

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system. (T)

f. Channel Charges (T)
(1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located:
(a) Within Base Rate Area - No Mileage Charge
(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.
(2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (same exchange or zone).

	Per Channel, Per Month	
(a) Option I		(T)
(i) Detroit Zone		
(A) Main stations and Dial Switching Equipment in same zone rate area	$ 5.00	(I)(
(B) Main stations and Dial Switching Equipment in adjacent zone rate areas	10.00	
(C) Main station and Dial Switching Equipment in nonadjacent zone rate areas	15.00	
(ii) Company except Detroit Zone (FORMERLY OF (2)(A) AND (B)	5.00	(I)(
(b) Option II		(T)
(i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located		(I)((I)(
(A) Basic Charge, per month	$ 100.00	
(B) Plus Channel Charge, each channel, per month	8.00	

(3) Extension Stations:
Channel charges as specified for extension stations under Interbuilding Channel Charges in this Tariff. (T)

g. Central Office Trunks

Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone:
Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone:
Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.0[illegible] each.

h. Initial Contract Period and Termination Charges
(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the charges in effect at the time the service is established.)

(Continued)

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By W. C. Patterson, Vice President
Detroit, Michigan

E531
Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #926 FILED WITH M.P.S.C. 6-27-66
TRANS. TO COMPT. OPERS. 6-28-66

First Revised Sheet 39.9
Cancels Original Sheet 39.9

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges
   b. Main Stations
      (1) Monthly Charges
         (b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.50
Next 250 Stations, each	7.75
Next 500 Stations, each	6.75
All Addl. Stations, each	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

c. Extension Stations, each

Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges are as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

d. Station instruments are provided in color as manufactured at the charge preceding.

e. Minimum Charges

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations, and channel charges, is applicable for each system. (T)
(T)

f. Channel Charges
   (1) Main Stations located in same central office area in which Dial Switching Equipment is located:
      (a) Within Base Rate Area - No Mileage Charge.
      (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.
   (2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone):

   Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff. (T)

   (3) Extension Stations:

   Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff. (T)

g. Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone:

- Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(Continued)

Issued under authority of Mich. Pub. Serv. Comm. Order dated Jun. [illegible], 1966, Case No. [illegible]

Issued: June [illegible], 1966 Effective: July [illegible], 1966

By W. C. Patterson, Vice President
Detroit, Michigan

E532
Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #26 FILED WITH M.P.S.C. 6-27-66
TRANS. TO COMPT. OPERS. 6-28-66

First Revised Sheet 41
Cancels Original Sheet 41

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS

1. Toll diversion arrangements are available to divert station users from long distance and multiunit access codes as indicated herein.

2. Type I (Former Type I and Type II combined as a single offering) (C)

   a. Type I Toll Diversion is available with Services 100, 200, 300 and Class E, Type II dial P.B.X. Systems where facility conditions permit.

   b. Two classes of toll diversion are available: (1) to divert all long distance and multiunit calls and (2) to divert all long distance calls only.

   c. When a station user attempts to dial a restricted call the call will be diverted. Depending upon the circumstances, and facilities available, the call will be diverted to a distinctive tone, a recorded announcement, or to the P.B.X. operator. If the P.B.X. is equipped with T[illegible]ls, long distance calls may be placed directly by the station user by dialing a preset [illegible]

   d. The service may be provided with or without message registers. Message registers [illegible] on the premises of the customer and one register is associated with each station so equ[illegible] record the number of one-unit calls placed. (C)

   e. Charges

      (1) The charges indicated below are in addition to all charges applicable to the class and type of telephone service with which the features are associated and for any miscellaneous services provided.

	Installation Charge	Monthly Charge	
(2) Toll Diversion			
First 25 Trunks (or less) equipped	$ 5.00 per trunk	$75.00	(R)
Each additional trunk equipped	5.00	3.00	(R)
If the customer has both classes of toll diversion as described in b. preceding the above charges apply for each class of toll diversion			(C)
(3) Message Registers			
Common Equipment	-	20.00	(R)
Each P.B.X station equipped with message registers	-	0.50	(R)

      (4) Initial Contract Period and Termination Charges

      The initial contract period for the initial twenty-five trunks (or less) for each class of toll diversion provided and the common equipment for message registers is three years in the same building starting with the date service is established. In the event of discontinuance of a class of toll diversion or common equipment for message registers, termination charges are applicable and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract. (R)

      Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in the preceding paragraph.

      Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled charges for the 5-year period, shall be applicable.

      (5) Moves

      For a move of a cabinet housing the message registers or a move of the common equipment, charges Based on Cost apply.

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By W. C. Patterson, Vice President

E533

Exhibit 41C

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TRANS. TO COMPT. OPERS. 6-28-66

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS (Continued)

3. Type II: (Formerly Type III - Previous Type II now combined with Type I) (C)

   a. Type II Toll Diversion is available with Centrex I and Centrex II P.B.X. stations.

   b. Two classes of toll diversion are available: (1) to divert all long distance and multiunit calls and (2) to divert all long distance calls only.

   c. When a station equipped with toll diversion dials a restricted code, the call will be diverted to a distinctive tone to indicate that such calls cannot be dialed from that station.

   d. The charges specified herein are not applicable to those specific stations arranged for toll diversion as of October 15, 1962 for systems installed prior to April 18, 1961.

   e. Charges (FORMERLY SHEET 41.2)

      (1) The charges indicated below are in addition to the regular charges for stations.

      (2) Centrex I and Centrex II stations, excluding Centrex I-CO residence stations:

	Per Month
Up to and including 100 stations equipped for toll diversion	$50.00
Additional Stations, each	0.50

If the customer has both classes of toll diversion as described in b. preceding, the above charges apply for each class of toll diversion.

      (3) Centrex I-CO Residence Stations

A nonrecurring charge of $2.50 is applicable for the provision of toll diversion on an existing station or for removing toll diversion from a station which remains in service. A nonrecurring charge of $2.50 is applicable for changing from one class of toll diversion to a different class of toll diversion. No monthly charge is applicable.

      (4) Initial Contract Period and Termination Charges

The initial contract period for the initial 100 stations or less for each class of toll diversion is three years.

Termination charges applicable in the event of discontinuance of a class of toll diversion prior to the expiration of the initial contract period shall be an amount equal to 50% of the unbilled monthly charges for the initial 100 stations (or less) for the unexpired portion of the contract period.

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By W. C. Patterson, Vice President
Detroit, Michigan

E534
Exhibit 41C

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TRANS TO COMM. OPERS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls, and call-transfer-attendant which is provided where facilities are available. (T)

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

4. Centrex I - CO P.B.X. systems are provided for:
   a. Business Service
   b. Combined administrative and residence service for colleges, universities, and similar educational institutions.

5. Location and Classification of Stations
   a. Business Stations
      (1) Stations located on the premises of a business customer or in the administrative buildings of a college or university, faculty clubs, student unions, and administrative quarters of dormitories.
      (2) Stations located on premises other than the customer's. Such stations are provided only if a separate exchange service is also furnished at the same off-premises locations.
   b. Residence Stations
      (1) Nonrestricted. Nonrestricted stations provide all service features as specified in 1. preceding on stations located in the living quarters (dormitories, apartments, etc.) of students, faculty members and employees when such quarters are provided by the college or university.
      (2) Restricted. Restricted summer service provides only intercommunicating calls between all stations on the same system. It will be provided for a minimum period of three months during the months of June, July, August and September only. The service is not provided on individual stations but on groups of stations. It is offered only where all rooms of a dormitory floor or all rooms of a floor of a dormitory wing are involved. Further, it is provided only in rooms occupied by other than regularly enrolled college or university students.
   c. Extension Stations
      (1) Business extension stations are furnished on premises provided by the customer. When located on premises other than the customer's, a separate exchange service must be furnished at the same off-premises location.
      (2) Residence extensions are provided only in the same room, suite or apartment as the main station.

6. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided as specified herein:
   a. Business Stations

      Department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this tariff.
   b. Residence Stations

      Indented listings under the main listing are not provided. The individual names are listed only in the alphabetical section at the charge specified for Extra Listings for residence service in this tariff.

(Continued)

E535
Exhibit 41C

ADV. #1045 FILED WITH M.P.S.C. 8-10-67
TRANS. TO COMPT. OPERS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges
   a. Attendant Positions

	Installation Charge	Monthly Charge	
(1) Console, per position	$200.00	$150.00	(T)
(2) Switchboard (Universal Type), per position	250.00	175.00	(D)(1

   b. Main Stations
      (1) Monthly Charges - Business Stations
         (a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$8.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

         (b) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

      (2) Monthly Charges - Residence Stations
         (a) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.
         (b) Restricted residence stations are provided at a charge of $3.25 each per month.

      (3) Service Connection Charges
         (a) Business Stations

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

(1) Special Switchboard positions no longer in service.

(Continued)

Issued under authority of Mich. Pub. Serv. Comm. Order dated July 20, 1967, Case No. U-2810

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By W. C. Patterson, Vice President
Detroit, Michigan

E536

Exhibit 41C

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TRANS. TO COMM. OPERS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges (Continued)
   - f. Central Office Trunks
     Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.
     - Company Except Detroit Zone
       Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or Zone from which service is provided.
     - Detroit Zone
       Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.042 each.
   - g. Special Features
     - (1) Overflow Stations
       Arrangements whereby groups of dial stations are associated with overflow station lines. A call to a busy station of a group is transferred to an overflow station line.

       The overflow arrangement is provided at no additional charge. Regular tariff charges are applicable for the centrex station used as an overflow station line. (T) (T)
   - h. Initial Contract Period and Termination Charges
     - (1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time the service is established.
     - (2) Termination Charges are not applicable for Residence stations which are disconnected for a period not to exceed 90 days. When such stations are reconnected Service Connection Charges will apply for each station reconnected.
     - (3) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.
     - (4) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

B. CENTREX I - CU SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls and call transfer-attendant. (T) | (T)

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant positions are located on the customer's premises. (T)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

(Continued)

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Detroit, Michigan

E537
Exhibit 41C

Michigan Bell Telephone Co
Tariff M.P.S.C. No. 2

ADV. #1015 FILED WITH M.P.S.C. 8-10-67
TRANS. TO COMM. O.S. 8-14-67

First Revised Sheet 39.4
Cancels Original Sheet 39.4

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges

	Installation Charge	Monthly Charge (T)
a. Attendant Positions		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems.		
(b) Universal Type, per position	250.00	175.00

b. Main Stations
(1) Monthly Charges
(a) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

c. Extension Stations, each
(1) Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

(2) Service Connection Charges
Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

d. Minimum Charges
A Minimum Monthly Charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(Continued)

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E538

Exhibit 41C

ADV. #2012 FILED WITH M.P.S.C 8-10-67

TRANS. TO COMM. OPERS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges

e. Channel Charges

(1) Main Stations located in same central office area in which Dial Switching Equipment is located:

(a) Within Base Rate Area - No Mileage Charge.

(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.

(2) Main Station located in a different central office area then the one in which the dial switching equipment is located (same exchange or zone).

Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

(3) Extension Stations

Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

f. Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

g. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established.

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss in equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

C. CENTREX II - CO SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls, call transfer - individual, add-on, consultation hold, trunk answer from any station and call transfer - attendant. (T)
(T)

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

(Continued)

E539
Exhibit 41C

ADV. #2025 FILED WITH M.P.S.C. 8-10-67
TRANS. TO COMPT. OPERS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this tariff.

5. Charges

a. Attendant Positions

	Installation Charge	Monthly Charge (T)
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations

(1) Monthly Charges

(a) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$8.50	$9.50	$10.50
Next 250 Stations, each	7.00	7.75	8.75
Next 500 Stations, each	6.75	7.25	8.00
All Addl. Stations, each	6.50	6.75	7.25

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00

c. Extension Stations

(1) Monthly Charges

Flat Rate Service, each	$3.50
Measured Service, each	3.25

(2) Service Connection Charges are as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(Continued)

E540

Exhibit 41C

ADV. #1025 FILED WITH M.P.S.C. 8-10-67

TRANS. TO COMPT. OPERS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

5. Charges (Continued)

h. Initial Contract Period and Termination Charges

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

D. CENTREX II - CU SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls, call transfer - individual, add-on, consultation hold, trunk answer from any station and call transfer - attendant. (T)
(T)

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant positions are located on the customer's premises. (T)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

5. Charges

	Installation Charge	Monthly Charge	
a. Attendant Positions			(T)
(1) Consoles, per position	$200.00	$150.00	
(2) Switchboards			
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems.			
(b) Universal Type, per position	$250.00	$175.00	

b. Main Stations

(1) Monthly Charges

(a) Flat Rate Service

	Rate Groups A,B,C, And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Groups D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$8.30	$9.30	$10.25
Next 250 Stations, each	6.80	7.55	8.50
Next 500 Stations, each	6.55	7.05	7.75
All addl. Stations, each	6.30	6.55	7.00

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(Continued)

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By W. C. Patterson, Vice President
Detroit, Michigan

E541

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #[illegible] FILED WITH M.P.S.C. 8-10-67
TRANS. TO COMM. OPERS. 8-14-67

First Revised Sheet 40
Cancels Original Sheet 40

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS

A. MOVES

1. Class A and Class B P.B.X. Systems:
For the move of the attendant positions, the charges applicable are the attendant positions installa- (T)
tion charge, service connection charges for all trunks and stations, main and extension, and installation charges for all tie lines and WATS lines terminating in the system. No additional charge applies for keyless stations moved at the same time.

2. Series 40 (20-40 Dial Pak) P.B.X. Systems:
   a. For a move of the apparatus cabinet, the basic service installation charge is applicable.
   b. For a move of the attendant position, the installation charge for a Call Director is applicable. (T)

3. Series 75 P.B.X. Systems:
For the move of the apparatus cabinet the charges applicable are the system installation charge, service connection charges for all trunks and stations, main and extension, and installation charges for all tie lines and WATS lines terminating in the system. A key station installation charge applies for the move of each key station or the change of a keyless to a key station. No additional charge applies for the move of keyless stations or the change from key to keyless stations at the same time the apparatus cabinet is moved.

4. Series 90 (Guest Dial Pak) P.B.X. Systems:
   a. For the move of the apparatus cabinet only or a move of the apparatus cabinet and the attendant
   position, the basic service installation charge and service connection charges for all trunks and (T)
   stations, main and extension, are applicable. (T)
   b. For a move of the attendant position only: $30.00
   c. For the move of a station: $ 5.00

5. Series 160 P.B.X. Systems:
   a. For the move of an Attendant Set: $25.00
   b. For the move of a Switchboard: $75.00
   c. The system installation charge, service connection charges for all trunks and stations, main and extension, and installation charges for all tie lines and WATS lines terminating in the system are applicable for:
      (1) A move of the apparatus cabinet only.
      (2) A move of the apparatus cabinet and the attendant positions. (T)
      (3) A move of the apparatus cabinet with a change of the attendant positions. |
      (4) A move of the apparatus cabinet with a move and a change of the attendant positions. (T)
      (5) No additional charge applies for keyless stations moved at the same time.

6. Class C, Series 100, Series 200, Series 300, Centrex I, and Centrex II P.B.X. Systems: (T)
   a. Attendant positions only:
   Charges based on cost not to exceed the service connection charges for all trunks and stations,
   main and extension and the installation charges for all tie lines, WATS lines, and attendant posi-
   tions associated with the system after the move. The existing contract will be continued. If the (T)
   move charge is equal to the service connection charges and installation charges, no additional
   charge applies for keyless stations moved at the same time.
   b. Dial switching equipment only or dial switching equipment and attendant positions: (T)
   Termination Charges are applicable to the entire system if the contract has not expired. Also
   applicable are the service connection charges for all trunks and stations, main and extension, and
   the installation charges for all tie lines, WATS lines, and attendant positions associated with the (T)
   system after the move. No additional charge applies for keyless stations moved at the same time.
   A new contract is applicable for the system as provided at the new location.

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By W. C. Patterson, Vice President
Detroit, Michigan

E542
Exhibit 41C -

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

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TRANS. TO COMPT. OPERS. 8-14-67

First Revised Sheet 40.1
Cancels Original Sheet 40.1

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS

B. CHANGES

1. Manual P.B.X. Systems:
   a. Change from a Manual P.B.X. System to another Manual P.B.X. System or to a Dial P.B.X. System
   (without a move of the attendant position) or (T)
   b. Change from one type attendant position to another type attendant postion on the same system (T)
   (without a move):

   Termination charges are applicable if the contract has not expired. The charge applicable is the
   installation charge for the new system or attendant position; service connection charges for all (T)
   trunks and stations, main and extension, added at the time of the change; and installation charges
   for all tie lines and WATS lines added at the time of the change. A new contract is applicable
   for the new system or attendant position. (T)

2. Dial P.B.X. Systems:
   a. Change from one dial P.B.X. system to another dial P.B.X. system or to a manual P.B.X. system
   (without move of dial switching equipment and/or attendant positions): (T)

   Termination Charges are applicable to the entire system if the contract has not expired.
   Also applicable are the system installation charges where specified, service connection
   charges for all trunks and stations, main and extension, associated with the new system and
   the installation charges for all tie lines, WATS lines and attendant positions associated (T)
   with the new system. No additional charge applies for the move of keyless stations at the
   same time. A new contract is applicable for the new system. The following exception will
   apply:

   If a change is made from one system to another among the Series 100, Series 200, Series 300,
   Centrex I - CU and Centrex II - CU systems and the dial switching equipment and attendant
   positions are retained at the same location and the dial switching equipment is modified, (T)
   the charge will be based on cost not to exceed the service connection charges for all trunks
   and stations, main and extension, associated with the new system and the installation charges
   for all tie lines, WATS lines, and attendant positions associated with the new system. No (T)
   termination charge is applicable unless the attendant positions are changed in which case |
   termination charges apply for the discontinued attendant positions. A new contract is (T)
   applicable for the new system. If the charge applicable for the change equals the full
   service connection and installation charges, no additional charge applies for the move of
   keyless stations at the same time.

   b. Change of dial switching equipment without a change from one Series to another:
      (1) To increase the station capacity of the system as required by growth:

      No charge is applicable. Existing contract will be continued.

      (2) For reasons other than growth:
      Series 200, Series 300, Centrex I - CU and Centrex II - CU Systems:

      Termination Charges are applicable to the entire system if the contract has not expired.
      Also applicable are the service connection charges for all trunks and stations, main and
      extension, associated with the new system and the installation charges for all tie lines,
      WATS lines, and attendant positions associated with the new system. No additional charge (T)
      applies for the move of keyless stations at the same time. A new contract is applicable for
      the new system.

      (3) To change service features:
      Series 160 Systems -
      (a) To change from a system without attendant direct station selection to a system with
      attendant direct station selection: $150.00. The existing contract will be continued.
      (b) To change from a system with attendant direct station selection to a system without
      attendant direct station selection, no charge is applicable. The existing contract
      will be continued.

(Continued)

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By W. C. Patterson, Vice President

E543

Exhibit 41C

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TRANS. TO COMPT. OPERS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS

B. CHANGES (Continued)

2. Dial P.B.X. Systems: (Continued)
   c. Change from one attendant position to another: (T)
      (1) Series 40 (20-40 Dial Pak)
      Change charges as applicable for Call Directors.
      (2) Series 90 (Guest Dial Pak)
      For a change in the color of an attendant position: $30.00 (T)
      For a change in the color of a station instrument, the regular change of instrument charge is applicable.
      (3) Series 160
         (a) For a change from a Console to a Key Attendant Set, Key Attendant Set to a Console, or from a Switchboard to a Console or Key Attendant Set: $25.00
         (b) For a change from a Console or Key Attendant Set to a Switchboard: $75.00
         (c) For a change in color of a Console: $25.00
         (d) For a change of a console with direct station selection to another console with direct station selection to increase or decrease capacity, no charge is applicable. The existing contract will be continued.
         (e) For a change of a console without direct station selection to another console without direct station selection to increase or decrease capacity, no charge is applicable. The existing contract will be continued.
      (4) Series 100, Series 200, Series 300, Centrex I and Centrex II:
         (a) For a change from a switchboard to a different type switchboard, from a switchboard to a console or from a console to a switchboard: (T) (T)

         Termination charges are applicable for the attendant positions if the contract has not expired. Also applicable are charges based on cost not to exceed the service connection charges for all trunks and stations, main and extension, on the system and the installation charges for all tie lines, WATS lines and attendant positions on the system. A new contract is applicable for the new attendant positions. If the charge applicable for the change equals the full service connection and installation charges, no additional charge applies for the move of keyless stations at the same time. (T) (T) (T)

         (b) For a change from one type console to another type console with different features: (C)

         Charges based on cost not to exceed the service connection charges for all trunks and stations, main and extension, and the installation charges for all tie lines, WATS lines, and attendant positions on the system. The existing contract will be continued.

         (c) For a change of a console to another console of the same type with the same features to increase or decrease capacity, no charge is applicable. The existing contract will be continued. (C)

C. MOVE AND CHANGE AT THE SAME TIME

1. Class A and Class B Systems: (T)
   The charges applicable are the installation charges for the new attendant position, the service connection charges for all trunks and stations, main and extension, and the installation charges for all tie lines, and WATS lines associated with the new attendant position. No additional charge applies for keyless stations moved at the same time. (T)

2. Series 40 (20-40 Dial Pak) (T)
   Attendant Positions:
   The installation charge for a Call Director is applicable.

3. Series 90 (Guest Dial Pak) (T)
   a. Attendant positions only: $30.00
   b. Stations: $ 5.00 each

Material previously on this Sheet now appears on Sheet 40.3

(Continued)

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By W. C. Patterson, Vice President
Detroit, Michigan

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Exhibit 41C

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TRANS. TO [illegible] OFFS. 8-14-67

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

MOVES AND CHANGES OF PRIVATE BRANCH EXCHANGE SYSTEMS

C. MOVE AND CHANGE AT THE SAME TIME (Continued)

4. Series 160 (FORMERLY SHEET 40.2)
   a. Attendant Positions only. (T)
      (1) Change to a console or a key attendant set with a move: $25.00
      (2) Change to a switchboard with a move: $75.00
   b. Dial switching equipment only or dial switching equipment and attendant positions: (T)
      The charge applicable is the system installation charge, service connection charges for all trunks and stations, main and extension, associated with the system at the new location, and installation charges for all tie lines and WATS lines associated with the system at the new location. No additional charge applies for keyless stations moved at the same time.

5. Class C, Series 100, Series 200, Series 300, Centrex I and Centrex II:
   a. Attendant positions only. (T)
      Termination charges are applicable for the attendant positions if the contract has not expired. (T)
      Also applicable are charges based on cost not to exceed the service connection charges for all trunks and stations, main and extension, associated with the system and the installation charges
      for all tie lines, WATS lines and attendant positions associated with the system. A new contract (T)
      is applicable for the new attendant positions. When the charge applicable for the move and (T)
      change equals the full service connection and installation charges, no additional charge applies for the move of keyless stations at the same time.
   b. Dial switching equipment only or dial switching equipment and attendant positions. (T)
      (1) Except as provided in (2) following, termination charges are applicable to the entire system if the contract has not expired. Also applicable are the service connection charges for all trunks and stations, main and extension, associated with the system at the same location and
      the installation charges for all tie lines, WATS lines and attendant positions associated (T)
      with the system at the same location. No additional charge applies for the move of keyless stations at the same time. A new contract is applicable for the system at the new location.
      (2) For a move and a change of dial switching equipment within a Series to increase the Station capacity of the system as required by growth, no charge is applicable. Existing contract will be continued.

6. Change in type of system with a move of either attendant positions and/or dial switching equipment: (T)
   Termination charges are applicable to the entire system if the contract has not expired. Also applicable are the service connection charges for all trunks and stations, main and extension, associated with the new system and the installation charges for all tie lines, WATS lines and
   attendant positions associated with the new system. No additional charge applies for the move (T)
   of keyless stations at the same time. A new contract is applicable for the new system.

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Detroit, Michigan

E545
Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C. [illegible]
TRANS. TO COMPT. OPERS. [illegible]

Fourth Revised Sheet 39.1
Cancels Third Revised Sheet 39.1

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations
(1) Monthly Charges - Business Stations
(a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$8.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Monthly Charges - Residence Stations
(a) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.
Special Toll Billing Arrangement (Temporary Experimental Offering until December 31, 1970 in the Marquette and Houghton Exchanges). (N)
For residence stations provided for students in dormitories where the Telephone Company assumes the responsibility of collecting from the individual users and bills toll charges directly to the stations a special toll billing arrangement charge of $0.20 applies for each statement rendered. (N)
(b) Restricted residence stations are provided at a charge of $3.25 each per month.

(3) Service Connection Charges
(a) Business Stations

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00

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Detroit, Michigan

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #2222 FILED WITH M.P.S.C. [illegible]
TRANS. TO COMPT. OPERS. [illegible]

Second Revised Sheet 41.1
Cancels First Revised Sheet 41.1

AUXILIARY SERVICES AND [illegible]IPMENT

PRIVATE BRANCH EXC[illegible] SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS (Continued)

3. Type II: (Formerly Type III - Previous Type II now combined with Type I)
   a. Type II Toll Diversion is available with Centrex I and Centrex II P.B.X. stations.
   b. Two classes of toll diversion are available: (1) to divert all long distance and multiunit calls and (2) to divert all long distance calls only.
   c. When a station equipped with toll diversion dials a restricted code, the call will be diverted to a distinctive tone to indicate that such calls cannot be dialed from that station.
   d. The charges specified herein are not applicable to those specific stations arranged for toll diversion as of October 15, 1962 for systems installed prior to April 18, 1961.
   e. Charges
      (1) The charges indicated below are in addition to the regular charges for stations.
      (2) Centrex I and Centrex II stations, excluding Centrex I-CO residence stations:

	Per Month
Up to and including 100 stations equipped for toll diversion	$50.00
Additional Stations, each	0.50

If the customer has both classes of toll diversion as described in b. preceding, the above charges apply for each class of toll diversion.

(3) Centrex I-CO Residence Stations
   (a) A nonrecurring charge of $2.50 is applicable for the provision of toll diversion on an existing station or for removing toll diversion from a station which remains in service, except under the following condition: (N)
      1. No charge is applicable where the Telephone Company initiates such a change involving a delinquent account under the Special Toll Billing Arrangement. The charge is applicable for removal of Toll Diversion if a formerly delinquent account is reinstated to the Special Toll Billing Arrangement. (N)
   (b) A nonrecurring charge of $2.50 per station is applicable for changing from one class of toll diversion to a different class of toll diversion. (T)
   (c) No monthly charge is applicable for toll diversion on residence stations. (T)

(4) Initial Contract Period and Termination Charges

The initial contract period for the initial 100 stations or less for each class of toll diversion is three years.

Termination charges applicable in the event of discontinuance of a class of toll diversion prior to the expiration of the initial contract period shall be an amount equal to 50% of the unbilled monthly charges for the initial 100 stations (or less) for the unexpired portion of the contract period.

PROTECTED

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E547

Exhibit 41C

ADV. WWHFILED WITH M.P.S.C. 6-7-68
TRANS. TO COMPT. OPERS. 6-7-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations

(1) Monthly Charges - Business Stations

(a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$6.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Monthly Charges - Residence Stations

(a) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.

(b) Restricted residence stations are provided at a charge of $3.25 each per month.

(D)

(1) Service Connection Charges now appear in Tariff M.P.S.C. No. 1

(Continued)

Issued under authority of Mich. Pub. Serv. Comm. Order dated Jun. 6, 1968, Case No. U-3139

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Detroit, Michigan

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Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. # FILED WITH M.P.S.C. 6-2-68
TRANS. TO COMPL. OPERS. 6-2-68

Second Revised Sheet 39.2
Cancels First Revised Sheet 39.2

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges

(D)

c. Extension Stations
  (1) Monthly Charges
    (a) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

    (b) Residence Stations
      Same charges as applicable for Residence Flat Rate Extension Stations.

(D)

d. Minimum Charges
  A minimum monthly charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system.

e. Interbuilding Channel Charges
  (1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.
    (a) Within Base Rate Area - No Mileage Charge
    (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.
  (2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

	Per Channel, Per Month
(a) Option I	
(i) Detroit Zone	
(A) Terminals in same zone rate area	$ 5.00
(B) Terminals in adjacent zone rate area	10.00
(C) Terminals in nonadjacent zone rate areas	15.00
(ii) Company except Detroit Zone	5.00

    (b) Option II
      (i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located

(A) Basic Charge, per month	$100.00
(B) Plus Channel Charges, each channel, per month	8.00

PROTESTED

(1) Service Connection Charges now appear in Tariff M.P.S C. No. 1

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Detroit, Michigan

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Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #[illegible] FILED WITH M.P.S.C 6-2-68
TRANS TO COMP. OPERS. 6-7-68

Second Revised Sheet 39.4
Cancels First Revised Sheet 39.4

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems		
(b) Universal Type, per position	250.00	175.00

b. Main Stations
(1) Monthly Charges
(a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service

	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(D)

c. Extension Stations, each
(1) Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

d. Minimum Charges (D)

A Minimum Monthly Charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations, and interbuilding channel charges, is applicable for each system. (T)

(1) Service Connection Charges now appear in Tariff M.P.S.C. No. 1

(Continued)

Issued under authority of Mich. Pub. Serv. Comm. Order dated Jun. 6, 1968, Case No. U-3139

Issued: June 7, 1968

Effective: June 10, 1968

By W. C. Patterson, Vice President
Detroit, Michigan

E550

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #1244 FILED WITH M.P.S.C. 6-7-68
TRANS. TO COMPL. OPERS. 6-7-68

Second Revised Sheet 39.6
Cancels First Revised Sheet 39.6

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this tariff.

5. Charges
   a. Attendant Positions

	Installation Charge	Monthly Charge
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

   b. Main Stations
      (1) Monthly Charges
         (a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$8.50	$9.50	$10.50
Next 250 Stations, each	7.00	7.75	8.75
Next 500 Stations, each	6.75	7.25	8.00
All Addl. Stations, each	6.50	6.75	7.25

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(

   c. Extension Stations
      (1) Monthly Charges

Flat Rate Service, each	$3.50
Measured Service, each	3.25

(

(1) Service Connection Charges now appear in Tariff M.P.S.C. No. 1

PROTECTED

(Continued)

Issued under authority of Mich. Pub. Serv. Comm. Order dated Jun. 6, 1968, Case No. U-3139

Issued: June 7, 1968

Effective: June 10, 1968

By W. C. Patterson, Vice President

E551

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Second Revised Sheet 39.9
Cancels First Revised Sheet 39.9

ADV. #44 FILED WITH M.P.S.C. 6-7-68
TRANS. TO COMPT. OPERS. 6-7-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges
  b. Main Stations
    (1) Monthly Charges
      (b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.50
Next 250 Stations, each	7.75
Next 500 Stations, each	6.75
All Addl. Stations, each	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(D)(1

c. Extension Stations, each
  Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

(D)(1

d. Station instruments are provided in color as manufactured or in black without additional charge. (T)

e. Minimum Charges

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations, and channel charges, is applicable for each system.

f. Channel Charges
  (1) Main Stations located in same central office area in which Dial Switching Equipment is located:
    (a) Within Base Rate Area - No Mileage Charge.
    (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.
  (2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone):
    Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.
  (3) Extension Stations:
    Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

g. Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone:

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

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(1) Service Connection Charges now appear in Tariff M.P.S.C. No. 1

(Continued)

Issued under authority of Mich. Pub. Serv. Com. Order dated Jun. 6, 1968, Case No. U-3139

Issued: June 7, 1968

Effective: June 10, 1968

By W. C. Patterson, Vice President
Detroit, Michigan

E552
Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C. 7-24-68
TRANS. TO [illegible] 7-24-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations
(1) Monthly Charges - Business Stations
(a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$8.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Monthly Charges - Residence Stations
(a) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.
(b) Restricted residence stations are provided at a charge of $3.25 each per month.

(3) Service Connection Charges
(a) Business Stations

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1				
	I	II	III	IV	
Service Connection Charge, Each	$4.50	$5.00	$5.50	$6.00	(R)

(Continued)

E553
Exhibit 41C

Michigan Bell Telephone Co
Tariff M.P.S.C. No. 2

ADV. [illegible] FILED WITH M.P.S.C. 7-24-68
TRANS. TO COMPL. OPERS. 7-24-68

Third Revised Sheet 39.2
Cancels Second Revised Sheet 39.2

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges

b. Main Stations
  (3) Service Connection Charges
    (b) Residence Stations (Non-restricted and restricted)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. (C)
No additional charge is applicable to change from non-restricted to restricted or vice versa. (C)

c. Extension Stations
  (1) Monthly Charges
    (a) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	3.25

    (b) Residence Stations

Same charges as applicable for Residence Flat Rate Extension Stations.

  (2) Service Connection Charges
    (a) Business Stations

Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges. (C)

    (b) Residence Stations

Service Connection Charges as specified for residence extension stations in Tariff M.P.S.C. No. 1 - Service Connection Charges. (C

d. Minimum Charges

A minimum monthly charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system.

e. Interbuilding Channel Charges
  (1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.
    (a) Within Base Rate Area - No Mileage Charge
    (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.
  (2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

	Per Channel, Per Month
(a) Option I	
(i) Detroit Zone	
(A) Terminals in same zone rate area	$ 5.00
(B) Terminals in adjacent zone rate area	10.00
(C) Terminals in nonadjacent zone rate areas	15.00
(ii) Company except Detroit Zone	5.00

    (b) Option II
      (i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located

(A) Basic Charge, per month	$100.00
(B) Plus Channel Charges, each channel, per month	8.00

PRO[illegible]ED

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED JULY 22, 1968, CASE NO. U-3191

EFFECTIVE: JULY 24, 1968

ISSUED: JULY 24, 1968

BY W. C. PATTERSON, VICE PRESIDENT

E554

Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C. 7-24-68
TRANS. [illegible] OPERS. 7-24-68

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Third Revised Sheet 39.4
Cancels Second Revised Sheet 39.4

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges

a. Attendant Positions

	Installation Charge	Monthly Charge
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems.		
(b) Universal Type, per position	250.00	175.00

b. Main Stations

(1) Monthly Charges

(a) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service

	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1				
	I	II	III	IV	
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00	(R)

c. Extension Stations, each

(1) Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

(2) Service Connection Charges

Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. (C)
No. 1 - Service Connection Charges. (C)

d. Minimum Charges

A Minimum Monthly Charge equal to the monthly charge for 250 main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED JULY 22, 1968, CASE NO. U-3191

ISSUED: JULY 24, 1968

EFFECTIVE: JULY 24, 1968

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E555

Exhibit 41C

ADV. #1045 FILED WITH M.P.S.C. 7-24-68
TRANS. TO COMM. OFFS. 7-24-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this tariff.

5. Charges

a. Attendant Positions

	Installation Charge	Monthly Charge
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations

(1) Monthly Charges

(a) Flat Rate Service

	Rate Groups A,B,C And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$8.50	$9.50	$10.50
Next 250 Stations, each	7.00	7.75	8.75
Next 500 Stations, each	6.75	7.25	8.00
All Addl. Stations, each	6.50	6.75	7.25

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1 (T) (T)			
	I	II	III	IV
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00 (R)

c. Extension Stations

(1) Monthly Charges

Flat Rate Service, each	$3.50
Measured Service, each	3.25

(2) Service Connection Charges are as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - (T)
Service Connection Charges. (T)

(Continued)

ISSUED UNDER AUTHORITY OF MICH.PUB.SERV.COMM.ORDER DATED JULY 22,1968,CASE NO.U-3191

ISSUED: JULY 24, 1968 EFFECTIVE: JULY 24, 1968

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E556

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #645 FILED WITH M.P.S.C 7-24-68
TRANS 0 [illegible] 7-24-68

Third Revised Sheet 39.9
Cancels Second Revised Sheet 39.9

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges

b. Main Stations

(1) Monthly Charges

(b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.50
Next 250 Stations, each	7.75
Next 500 Stations, each	6.75
All Addl. Stations, each	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1				
	I	II	III	IV	
Service Connection Charge, each	$4.50	$5.00	$5.50	$6.00	(R)

c. Extension Stations, each

Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges are as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges. (T) (T)

d. Station instruments are provided in color as manufactured at the charge preceding.

e. Minimum Charges

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations, and channel charges, is applicable for each system.

f. Channel Charges

(1) Main Stations located in same central office area in which Dial Switching Equipment is located:

(a) Within Base Rate Area - No Mileage Charge.

(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.

(2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone):

Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

(3) Extension Stations:

Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

g. Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

Company Except Detroit Zone:

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(Continued)

ISSUED UNDER AUTHORITY OF MICH. PUB. SERV. COMM. ORDER DATED JULY 22, 1968, CASE NO. U-3191

ISSUED: JULY 24, 1968

EFFECTIVE: JULY 24, 1968

BY W. C. PATTERSON, VICE PRESIDENT
DETROIT, MICHIGAN

E557

Exhibit 41C

ADV. #1257 FILED WITH M.P.S.C. 11-26-68

TRANS. TO COMPT. OFFS. 12-12-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

(T)

b. Main Stations - Monthly Charges

(T)

(1) Regular Service

(a) Business Stations

(i) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$8.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(ii) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(b) Residence Stations

(i) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.

Special Toll Billing Arrangement (Temporary Experimental Offering until December 31, 1970 in the Marquette and Houghton Exchanges).
For residence stations provided for students in dormitories where the Telephone Company assumes the responsibility of collecting from the individual users and bills toll charges directly to the stations a special toll billing arrangement charge of $0.20 applies for each statement rendered.

(c) Restricted residence stations are provided at a charge of $3.75 each per month.

(N)

(2) Metropolitan Service
(a) In addition to the station charges specified in b (1)(a)(i), (1)(a)(ii) and (1)(b)(i)
preceding a charge of $2.50 per month applies for each main station plus a charge of
$.05 per message for messages to stations within the Local Service Areas.
(b) Exchanges and Zones where the service is available, Local Service Areas, and regula-
tions are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1

(N)

Material previously on this Sheet now appears on Sheet 39.2.

E558

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. [illegible]1257 [illegible] 11-26-68

TRANS. TO COMM. [illegible] 11-27-68

Fourth Revised Sheet 39.2
Cancels Third Revised Sheet 39.2

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges
   c. Service Connection Charges

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
(1) Business Main Stations, each	$4.50	$5.00	$5.50	$6.00

(2) Residence Main Stations (Non-restricted and restricted) (T)

Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

d. Extension Stations
   (1) Monthly Charges
      (a) Business Stations

Flat Rate Service, each	$3.50
Measured Rate Service, each	$3.25

(b) Residence Stations

Same charges as applicable for Residence Flat Rate Extension Stations.

(2) Service Connection Charges
   (a) Business Stations

Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(b) Residence Stations

Service Connection Charges as specified for residence extension stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

e. Minimum Charges

A minimum monthly charge equal to the monthly charge for 250 Regular Service main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system. (T)

f. Interbuilding Channel Charges
   (1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.
      (a) Within Base Rate Area - No Mileage Charge
      (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.
   (2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

	Per Channel, Per Month
(a) Option I	
(i) Detroit Zone	
(A) Terminals in same zone rate area	$ 5.00
(B) Terminals in adjacent zone rate area	10.00
(C) Terminals in nonadjacent zone rate areas	15.00
(ii) Company except Detroit Zone	5.00
(b) Option II	
(i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located	
(A) Basic Charge, per month	$100.00
(B) Plus Channel Charges, each channel, per month	8.00

Issued under authority of Mich. Pub. Serv. Comm. Order dated October 3, 1968, Case No. U-3246

Issued: November 27, 1968

Effective: December 1, 1968

By W. C. Patterson, Vice President
Detroit, Michigan

E559

Exhibit 41C

ADV. #1052 FILED WITH M.P.S.C. 11-26-68

TRANS. TO COMPT. OPERS. 12-12-68

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Second Revised Sheet 39.3
Cancels First Revised Sheet 39.3

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges (Continued)

g. Central Office Trunks

Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

(1) Regular Service (C)

Company Except Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or Zone from which service is provided.

Detroit Zone

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.042 each.

(2) Metropolitan Service (N)

Trunks have the same Local Service Area calling privileges and message rate charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (N)

h. Special Features

(1) Overflow Stations

Arrangements whereby groups of dial stations are associated with overflow station lines. A call to a busy station of a group is transferred to an overflow station line.

The overflow arrangement is provided at no additional charge. Regular tariff charges are applicable for the centrex station used as an overflow station line.

i. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time the service is established. For termination charge purposes 50% of the rates for Regular Service main stations will be used in all cases. (N) (N)

(2) Termination Charges are not applicable for Residence stations which are disconnected for a period not to exceed 90 days. When such stations are reconnected Service Connection Charges will apply for each station reconnected.

(3) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(4) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

B. CENTREX I - CU SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, indentified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls and call transfer-attendant.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant positions are located on the customer's premises.

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

:

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E560

Exhibit 41C

ADV. #1252 FILED WITH M.P.S.C 11-26-68

TRANS. TO COMM'T. [illegible] 12-12-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

E. CENTREX I - CU SYSTEMS (Continued)

5. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems		
(b) Universal Type, per position	250.00	175.00

b. Main Stations - Monthly Charges (T)

(1) Regular Service (T)

(a) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Service	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Metropolitan Service (N)

(a) In addition to the station charges specified in b.(1)(a) and (b) preceding a charge of $2.50 per month applies for each main station plus a charge of $.05 per message for messages to stations within the Local Service Areas.

(b) Exchange and zones where the service is available, Local Service Areas, and regulations are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (N)

c. Main Stations - Service Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Main Stations, each	$4.50	$5.00	$5.50	$6.00

d. Extension Stations, each

(1) Monthly Charges

Flat Rate Service	$3.50
Message Rate Service	3.25

(2) Service Connection Charges

Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

e. Minimum Charges

A Minimum Monthly Charge equal to the monthly charge for 250 Regular Service main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system. (T)

(Continued)

Issued under authority of Mich. Pub. Serv. Comm. Order dated October 3, 1968, Case No. U-3246

E561

Russell D. Exhibit 41C

ADV. #1259 FILED WITH M.P.S.C. 11-26-68
TRANS. TO [illegible] 12-10-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CO SYSTEMS (Continued)

5. Charges

f. Channel Charges

(1) Main Stations located in same central office area in which Dial Switching Equipment is located:

(a) Within Base Rate Area - No Mileage Charge.

(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.

(2) Main Station located in a different central office area then the one in which the dial switching equipment is located (same exchange or zone).
Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

(3) Extension Stations
Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

g. Central Office Trunks
Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks. (C)

(1) Regular Service

Company Except Detroit Zone
Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone
Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each. (N)

(2) Metropolitan Service
Trunks have the same Local Service Area calling privileges and message rate charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (N)

h. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established. For termination charge purposes 50% of the rates for Regular Service main stations will be used in all cases. (N)
(N)

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss in equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

C. CENTREX II - CO SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls, call transfer - individual, add-on, consultation hold, trunk answer from any station and call transfer - attendant.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

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By W. C. Patterson, Vice President
Detroit, Michigan

E562

[illegible] Exhibit 41C

ADV. #1452 FILED WITH M.P.S.C 11-26-68
TRANS TO [illegible] 12-12-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this tariff.

5. Charges
   a. Attendant Positions

	Installation Charge	Monthly Charge
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

   b. Main Stations - Monthly Charges (T)
      (1) Regular Service |
         (a) Flat Rate Service (T)

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$8.50	$9.50	$10.50
Next 250 Stations, each	7.00	7.75	8.75
Next 500 Stations, each	6.75	7.25	8.00
All Addl. Stations, each	6.50	6.75	7.25

The stations have the same Local Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

         (b) Measured Service

	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(N)
      (2) Metropolitan Service
         (a) In addition to the station charges specified in (1)(a) and (1)(b) preceding a charge of $2.50 per month applies for each main station plus a charge of $.05 per message for messages to stations within the Local Service Areas. |
         (b) Exchanges and Zones where the service is available, Local Service Areas, and regulations are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (N)

   n stations - Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Main stations, each	$4.50	$5.00	$5.50	$6.00

   d. Extension Stations
      (1) Monthly Charges

Flat Rate Service, each	$3.50
Measured Service, each	3.25

      (2) Service Connection Charges are as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

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By W. C. Patterson, Vice President
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E563
Exhibit 41C

[illegible]
ADV. [illegible] FILED WITH M.P.S.C. 11-26-68
TRANS. TO [illegible] 12-12-68

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Second Revised Sheet 39.7
Cancels First Revised Sheet 39.7

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

5. Charges

e. Station instruments are provided in color as manufactured at the charges preceding.

f. Minimum Charges:

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system.

g. Channel Charges

(1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located:
(a) Within Base Rate Area - No Mileage Charge
(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.

(2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (same exchange or zone).

		Per Channel, Per Month
(a) Option I		
(i) Detroit Zone		
(A) Main stations and Dial Switching Equipment in same zone rate area		$ 5.00
(B) Main stations and Dial Switching Equipment in adjacent zone rate areas		10.00
(C) Main station and Dial Switching Equipment in nonadjacent zone rate areas		15.00
(ii) Company except Detroit Zone		5.00
(b) Option II		
(i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located		
(A) Basic Charge, per month	$ 100.00	
(B) Plus Channel Charge, each channel, per month	8.00	

(3) Extension Stations:
Channel charges as specified for extension stations under Interbuilding Channel Charges in this Tariff.

h. Central Office Trunks

Normal exchange central office trunks are privided as required at no additional charge except for messages originated on such trunks. (C)

(1) Regular Service

Company Except Detroit Zone:
Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone:
Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except there is no message unit allowance. All message units are charged for at $.042 each. (N)

(2) Metropolitan Service
Trunks have the same Local Service Area calling privileges and message rate charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (N)

i. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date ser-
vice is established. Termination charges will apply to 1) all attendant positions, and 2)
the number of main stations specified in the initial contract. Termination charges are
applicable in the event of complete removal of the service and also in the event of dis-
continuance of attendant positions or a reduction in the number of main stations initially
contracted for in cumulative amounts of 50 stations prior to the expiration of the contract
period and shall be an amount equal to 50% of the unbilled charges for the unexpired por-
tion of the contract period based on the charges in effect at the time the service is es-
tablished. For termination charge purposes 50% of the rates for Regular Service main (N)
stations will be used in all cases. (N)

(Continued)

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E564

Exhibit 41C

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TRANS. TO [illegible] 12-12-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

5. Charges (Continued)

i. Initial Contract Period and Termination Charges

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

D. CENTREX II - CU SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls, call transfer - individual, add-on, consultation hold, trunk answer from any station and call transfer - attendant.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant positions are located on the customer's premises.

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed direct if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

5. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems		
(b) Universal Type, per position	$250.00	$175.00

b. Main Stations - Monthly Charges (T)
(1) Regular Service (T)
(a) Flat Rate Service

	Rate Groups A,B,C, And Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Groups D And Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$8.30	$9.30	$10.25
Next 250 Stations, each	6.80	7.55	8.50
Next 500 Stations, each	6.55	7.05	7.75
All addl. Stations, each	6.30	6.55	7.00

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(Continued)

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E565
Exhibit 41C

ISSUED
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TRANS. TO [illegible] 12-12-68

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges (T)
   b. Main Stations - Monthly Charges (Continued) (T)
      (1) Regular Service

	Detroit Zone
(b) Measured Service	$9.50
First 250 Stations, each	7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Metropolitan Service (N)
   (a) In addition to the station charges specified in b.(1)(a) and (b) preceding a charge of $2.50 per Month applies for each main station plus a charge of $.05 per message for messages to stations within the Local Service Areas.
   (b) Exchanges and Zones where the service is available, Local Service Areas, and regulations are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (N)

c. Main Stations - Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Main Stations, each	$4.50	$5.00	$5.50	$6.00

d. Extension Stations, each

Monthly Charges	
Flat Rate Service	$3.50
Message Rate Service	3.25

Service Connection Charges are as specified for business extensions in Tariff M.P.S.C. No. 1. - Service Connection Charges.

e. Station instruments are provided in color as manufactured or in black without additional charge.

f. Minimum Charges

A minimum monthly charge equal to the monthly charge for 150 Regular Service main stations, excluding charges for manual switching equipment, extension stations, and channel charges, is applicable for each system.

g. Channel Charges
   (1) Main Stations located in same central office area in which Dial Switching Equipment is located:
      (a) Within Base Rate Area - No Mileage Charge.
      (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.
   (2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone):

   Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

   (3) Extension Stations:
   Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

‡ Material previously on this Sheet now appears on Sheet 39.10.

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Detroit, Michigan

E566

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. # [illegible] FILED WITH M.P.S.C. 11-26-68
TRANS. TO [illegible] 12-12-68

First Revised Sheet 39.10
Cancels Original Sheet 39.10

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges

h. Central Office Trunks

Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

(1) Regular Service (C)

Company Except Detroit Zone:

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

Detroit Zone:

Trunks have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Metropolitan Service (N)

Trunks have the same Local Service Area calling privileges and message rate charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (N)

i. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established. For Termination charge purposes 50% of the rates for Regular (N) Service main stations will be used in all cases. (N)

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

PROTECTED

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By W. C. Patterson, Vice President
Detroit, Michigan

E567

Exhibit 41C

ADV. #____ FILED WITH M.P.S.C. [illegible]

TRANS. TO COMPT. OFFS [illegible]

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Eighth Revised Sheet 39.1
Cancels Seventh Revised Sheet 39.1

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges
   a. Attendant Positions

	Installation Charge	Monthly Charge
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

   b. Main Stations - Monthly Charges
      (1) Regular Service
         (a) Business Stations
            (i) Flat Rate Service

	Rate Groups A, B and C	Rate Group D	Rate Group E	(T) | (T)
First 250 Stations, each	$6.50	$7.50	$8.50	
Next 250 Stations, each	5.75	6.50	7.50	
Next 500 Stations, each	5.50	6.00	6.75	
All Addl. Stations, each	5.25	5.50	6.00	

The stations have the same Local Service Area calling privileges and message charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided. (T)

            (ii) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message (T)
charges as specified for Business Measured Service in Tariff M.P.S.C. No. 1. (T)

         (b) Residence Stations
            (i) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message charges as are applicable for Individual Line Flat Rate Service. (T)

Special Toll Billing Arrangement
For residence stations furnished in university-provided housing where the Telephone Company assumes the responsibility of collecting from the individual users and bills toll charges directly to the stations, a special toll billing arrangement charge of $0.20 applies for each statement rendered.

            (ii) Restricted residence stations are provided at a charge of $3.25 each per month.

      (2) Metropolitan Service

First 250 Stations, each	$10.25
Next 250 Stations, each	9.25
Next 500 Stations, each	8.25
All Addl. Stations, each	7.25

The stations have the same Local Service Area calling privileges and message (T)
charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (T)

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By L. J. Haynes, Vice President
Detroit, Michigan

E568

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. FILED WITH M.P.S.C.
TRANS. TO COMPT. OFFS.

Sixth Revised Sheet 39.2
Cancels Fifth Revised Sheet 39.2

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges (Continued)

c. (D)(1)

d. Extension Stations, each

(1) Monthly Charges
(a) Business Stations
Flat Rate Service $3.50
Measured Rate Service and Metropolitan Service $3.25

(b) Residence Stations
Same charges as applicable for Residence Flat Rate Extension Stations. (D)(1

e. Minimum Charges

A Minimum monthly charge equal to the monthly charge for 250 Regular Service main stations, excluding charges for manual switching equipment, extension stations and channel charges is applicable for each system.

f. Interbuilding Channel Charges

(1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.
(a) Within Base Rate Area - No Mileage Charge
(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.

(2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

	Per Channel, Per Month
(a) Option I	
(i) Detroit Zone	
(A) Terminals in same zone rate area	$ 5.00
(B) Terminals in adjacent zone rate area	10.00
(C) Terminals in nonadjacent zone rate areas	15.00
(ii) Company except Detroit Zone	5.00
(b) Option II	
(i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located.	
(A) Basic Charge, per month	100.00
(B) Plus Channel Charges, each channel, per month	8.00

(1) Installation charges now covered in Tariff M.P.S.C. No. 1.

PROTESTED

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Exhibit 41C

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TRANS. TO COMPL. OFFS.

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges (Continued)

g. Central Office Trunks
Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

(1) Regular Service

Company Except Detroit Zone
Trunks have the same Local Service Area calling privileges and message charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the Exchange or Zone from which service is provided. (T)

Detroit Zone
Trunks have the same Local Service Area calling privileges and message charges as specified for Business Measured Service in Tariff M.P.S.C. No. 1. (T) (T)

(2) Metropolitan Service
Trunks have the same Local Service Area calling privileges and message charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (T)

h. Special Features

(1) Overflow Stations
Arrangements whereby groups of dial stations are associated with overflow station lines. A call to a busy station of a group is transferred to an overflow station line. The overflow arrangement is provided at no additional charge. Regular tariff charges are applicable for the centrex station used as an overflow station line.

i. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the rates in effect at the time the service is established. For termination charge purposes 50% of the rates for Regular Service main stations will be used in all cases.

(2) Termination Charges are not applicable for Residence stations which are disconnected for a period not to exceed 90 days. When such stations are reconnected, Service Connection Charges will apply for each station reconnected.

(3) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(4) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

B. CENTREX I - CU SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, indentified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls and call transfer-attendant.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant positions are located on the customer's premises.

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

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Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. # ___ FILED WITH M.P.S.C. ___

TRANS. TO COMPT. OFFS. ___

Sixth Revised Sheet 39.4
Cancels Fifth Revised Sheet 39.4

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems		
(b) Universal Type, per position	250.00	175.00

b. Main Stations - Monthly Charges
  (1) Regular Service
    (a) Flat Rate Service (T)

	Rate Groups A, B and C	Rate Group D	Rate Group E
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The stations have the same Local Service Area calling privileges and message charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided. (T)

    (b) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The stations have the same Local Service Area calling privileges and message charges as specified for Measured Business Service in Tariff M.P.S.C. No. 1. (T)

  (2) Metropolitan Service

First 250 Stations, each	$10.00
Next 250 Stations, each	9.00
Next 500 Stations, each	8.00
All Addl. Stations, each	7.00

The stations have the same Local Service Area calling privileges and message charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (T)

c. (D)(

d. Extension Stations, each
  (1) Monthly Charges

Flat Rate Service	$3.50	
Message Rate Service and Metropolitan Service		$3.25

  (2) (D)(

e. Minimum Charges
A Minimum Monthly Charge equal to the monthly charge for 250 Regular Service main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

(1) Installation charges now covered in Tariff M.P.S.C. No. 1.

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TRANS. TO COMM. [illegible]

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges
   f. Channel Charges
      (1) Main Stations located in same central office area in which Dial Switching Equipment is located:
         (a) Within Base Rate Area - No Mileage Charge.
         (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Boundary.
      (2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone).
      Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.
      (3) Extension Stations
      Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.
   g. Central Office Trunks
   Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.
      (1) Regular Service
      Company Except Detroit Zone (T)
      Trunks have the same Local Service Area calling privileges and message charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.
      Detroit Zone (T)
      Trunks have the same Local Service Area calling privileges and message charges as (T)
      specified for Business Measured Service in Tariff M.P.S.C. No. 1.
      (2) Metropolitan Service (T)
      Trunks have the same Local Service Area calling privileges and message charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1.
   h. Initial Contract Period and Termination Charges
      (1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established. For termination charge purposes 50% of the rates for Regular Service main stations will be used in all cases.
      (2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.
      (3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss in equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

C. CENTREX II - CO SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls, call transfer - individual, add-on, consultation hold, trunk answer from any station and call transfer - attendant.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment is located in buildings owned or leased by the Telephone Company and the manual switching equipment is on the customer's premises.

E572
Exhibit 41C

ADV. # FILED WITH M.P.S.C.
TRANS. TO COMPT. OFFS.

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

5. Charges
   a. Attendant Positions

	Installation Charge	Monthly Charge
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

   b. Main Stations - Monthly Charges
      (1) Regular Service
         (a) Flat Rate Service

	Rate Groups A, B and C	Rate Group D	Rate Group E	(T) | (T)
First 250 Stations, each	$8.50	$9.50	$10.50	
Next 250 Stations, each	7.00	7.75	8.75	
Next 500 Stations, each	6.75	7.25	8.00	
All Addl. Stations, each	6.50	6.75	7.25	

The stations have the same Local Service Area calling privileges and message charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided. (T)

(b) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

The stations have the same Local Service Area calling privileges and message charges (T)
as specified for Business Measured Service in Tariff M.P.S.C. No. 1. (T)

(2) Metropolitan Service

First 250 Stations, each	$12.25
Next 250 Stations, each	10.50
Next 500 Stations, each	9.50
All Addl. Stations, each	8.50

The stations have the same Local Service Area calling privileges and message charges (T)
as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (T)
(D)

c.

d. Extension Stations, each
   (1) Monthly Charges
      Flat Rate Service $3.50
      Measured Rate Service and Metropolitan Service $3.25
   (2) (D)

PROTESTED

(1) Installation Charges now covered in Tariff M.P.S.C. No. 1.

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Detroit, Michigan

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Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. # [illegible] FILED WITH M.P.S.C. [illegible]
TRANS. TO COMPL. O. FRS. [illegible]

Third Revised Sheet 39.7
Cancels Second Revised Sheet 39.7

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. Centrex II - CO SYSTEMS (Continued)

5. Charges

e. Station instruments are provided in color as manufactured at the charges preceding.

f. Minimum Charges:

A minimum monthly charge equal to the monthly charge for 150 main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system.

g. Channel Charges
- (1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located:
  - (a) Within Base Rate Area - No Mileage Charge
  - (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.
- (2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (same exchange or zone).

	Per Channel, Per Month
(a) Option I	
(i) Detroit Zone	
(A) Main stations and Dial Switching Equipment in same zone rate area	$ 5.00
(B) Main stations and Dial Switching Equipment in adjacent zone rate areas	10.00
(C) Main station and Dial Switching Equipment in nonadjacent zone rate areas	15.00
(ii) Company except Detroit Zone	5.00

  - (b) Option II
    - (i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located
      - (A) Basic Charge, per month $ 100.00
      - (B) Plus Channel Charge, each channel, per month 8.00
- (3) Extension Stations:
  Channel charges as specified for extension stations under Interbuilding Channel Charges in this Tariff.

h. Central Office Trunks
Normal exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.
- (1) Regular Service
  Company Except Detroit Zone:
  Trunks have the same Local Service Area calling privileges and message charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.
  Detroit Zone:
  Trunks have the same Local Service Area calling privileges and message charges as specified for Business Measured Service in Tariff M.P.S.C. No. 1. (T)
- (2) Metropolitan Service (T)
  The stations have the same Local Service Area calling privileges and message charges (T)
  as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1.

i. Initial Contract Period and Termination Charges
- (1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the charges in effect at the time the service is established. For termination charge purposes 50% of the rates for Regular Service main stations will be used in all cases.

(Continued)

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Detroit, Michigan

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Exhibit 41C

ADV. # [illegible] WITH M.P.S.C.

TRANS. TO COMPT. OPRS.

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Third Revised Sheet 39.8
Cancels Second Revised Sheet 39.8

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

5. Charges (Continued)

i. Initial Contract Period and Termination Charges

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period shall be applicable.

D. CENTREX II- CU SYSTEMS

1. The basic service features provided are: direct inward dialing, direct outward dialing, identified outward toll dialing, station/station calling, station hunting, restriction from outgoing calls, call transfer - individual, add-on, consultation hold, trunk answer from any station and call transfer - attendant.

2. The Centrex dial P.B.X. systems covered herein will require certain physical arrangements of the facilities of the Telephone Company and are therefore subject to the availability of such facilities.

3. The dial switching equipment and the attendant positions are located on the customer's premises.

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed direct if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

5. Charges	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems		
(b) Universal Type, per position	$250.00	$175.00

b. Main Stations - Monthly Charges

(1) Regular Service

(a) Flat Rate Service

	Rate Groups A, B and C	Rate Group D	Rate Group E	
				(T)
First 250 Stations, each	$8.30	$9.30	$10.25	
Next 250 Stations, each	6.80	7.55	8.50	
Next 500 Stations, each	6.55	7.05	7.75	
All addl. Stations, each	6.30	6.55	7.00	

The stations have the same Local Service Area calling privileges and message charges (T) as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange (T) or zone from which service is provided.

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(Continued)

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TRANS. TO COMPT. OFF'S ___

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Sixth Revised Sheet 39.9
Cancels Fifth Revised Sheet 39.9

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges
   b. Main Stations - Monthly Charges (Continued)
      (1) Regular Service

(b) Measured Rate Service	Detroit Zone
First 250 Stations, each	$ 9.50
Next 250 Stations, each	7.75
Next 500 Stations, each	6.75
All Addl. Stations, each	5.75

The stations have the same Local Service Area calling privileges and message charges as specified for Measured Business Service in Tariff M.P.S.C. No. 1. (T) (T)

(2) Metropolitan Service	
First 250 Stations, each	$12.00
Next 250 Stations, each	10.25
Next 500 Stations, each	9.25
All Addl. Stations, each	8.25

The stations have the same Local Service Area calling privileges and message charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1. (T) (T)

(D)(1)

c.

d. Extension Stations, each

(1) Monthly Charges

Flat Rate Service	$3.50
Message Rate Service and Metropolitan Service	$3.25

(D)(1)

e. Station instruments are provided in color as manufactured or in black without additional charge.

f. Minimum Charges

A minimum monthly charge equal to the monthly charge for 150 Regular Service main stations, excluding charges for manual switching equipment, extension stations, and channel charges, is applicable for each system.

g. Channel Charges
   (1) Main Stations located in same central office area in which dial switching equipment is located:
      (a) Within Base Rate Area - No Mileage Charge.
      (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.

   (2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone):

      Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

   (3) Extension Stations:
      Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

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(1) Installation charges now covered in Tariff M.P.S.C. No. 1.

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TRANS. TO COMM. O[illegible]S.____

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Second Revised Sheet 39.10
Cancels First Revised Sheet 39.10

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. **Charges**

h. Central Office Trunks
Normal Exchange central office trunks are provided as required at no additional charge except for messages originated on such trunks.

(1) Regular Service

Company Except Detroit Zone:

Trunks have the same Local Service Area calling privileges and message charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided. (T)

Detroit Zone:

Trunks have the same Local Service Area calling privileges and message charges (T)
as specified for Business Measured Service in Tariff M.P.S.C. No. 1. (T)

(2) Metropolitan Service

Trunks have the same Local Service Area calling privileges and message charges as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1.

i. Initial Contract Period and Termination Charges

(1) The initial contract period is five years in the same location starting with the date service is established. Termination charges will apply to: 1) all attendant positions, and 2) the number of main stations specified in the initial contract. Termination charges are applicable in the event of complete removal of the service and also in the event of discontinuance of attendant positions or a reduction in the number of main stations initially contracted for in cumulative amounts of 50 stations prior to the expiration of the contract period and shall be an amount equal to 50% of the unbilled monthly charges for the unexpired portion of the contract period based on the charges in effect at the time service is established. For termination charge purposes 50% of the rates for Regular Service main stations will be used in all cases.

(2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in (1) preceding.

(3) Where a contract is cancelled before installation is completed a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled monthly charges for the 5-year period, shall be applicable.

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Detroit, Michigan

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Exhibit 41C

ADV. # [illegible] WITH M.P.S.C.

TRANS. TO COMM. OFFS. [illegible]

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Second Revised Sheet 41
Cancels First Revised Sheet 41

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS

1. Toll diversion arrangements are available to divert station users from long distance and interzone access codes as indicated herein. (T)

2. Type I (Former Type I and Type II combined as a single offering)

   a. Type I Toll Diversion is available with Services 100, 200, 300 and Class E, Type II dial P.B.X. Systems where facility conditions permit.

   b. Two classes of toll diversion are available: (1) to divert all long distance and interzone calls and (2) to divert all long distance calls only.

   c. When a station user attempts to dial a restricted call the call will be diverted. Depending upon the circumstances, and facilities available, the call will be diverted to a distinctive tone, a recorded announcement, or to the P.B.X. operator. If the P.B.X. is equipped with Toll Terminals, long distance calls may be placed directly by the station user by dialing a preset code.

   d. The service may be provided with or without message registers. Message registers are located on the premises of the customer and one register is associated with each station so equipped to record the number of local calls placed. (T)

   e. Charges

      (1) The charges indicated below are in addition to all charges applicable to the class and type of telephone service with which the features are associated and for any miscellaneous services provided.

	Installation Charge	Monthly Charge
(2) Toll Diversion		
First 25 Trunks (or less) equipped, per trunk	$8.80*(I)(R)	$75.00
Each additional trunk equipped	8.80*(I)(R)	3.00

If the customer has both classes of toll diversion as described in b. preceding the above charges apply for each class of toll diversion.

* Not applicable if installed at the same time as the P.B.X. System. (T)

	Installation Charge	Monthly Charge
(3) Message Registers		
Common Equipment	8.80*(I)	20.00
Each P.B.X. station equipped with message registers	8.80#(I)	0.50

* Not applicable if installed at the time Toll Diversion is installed. (N)

# Not applicable if installed at the time Common Equipment is installed or at the time a station is installed. (N)

PROTECTED

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By L. J. Haynes, Vice President
Detroit, Michigan

E578

Exhibit 41C

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

ADV. #___FILED WITH M.P.S.C.
TRANS. TO COMPT. G.

Fourth Revised Sheet 41.1
Cancels Third Revised Sheet 41.1

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS (Continued)

2. Type I (Former Type I and Type II combined as a single offering) (Continued)

e. Charges (Continued)

(4) Initial Contract Period and Termination Charges

The initial contract period for the initial twenty-five trunks (or less) for each class of toll diversion provided and the common equipment for message registers is three years in the same building starting with the date service is established. In the event of discontinuance of a class of toll diversion or common equipment for message registers, termination charges are applicable and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract.

Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the termination charge shall be applicable as specified in the preceding paragraph.

Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled charges for the 3-year period, shall be applicable.

(5) Moves

For a move of a cabinet housing the message registers or a move of the common equipment, charges Based on Cost apply.

3. Type II: (Formerly Type III - Previous Type II now combined with Type I)
   - a. Type II Toll Diversion is available with Centrex I and Centrex II P.B.X. stations.
   - b. Two classes of toll diversion are available: (1) to divert all long distance and interzone calls outside the local calling area and (2) to divert all long distance calls only.
   - c. When a station equipped with toll diversion dials a restricted code, the call will be diverted to a distinctive tone to indicate that such calls cannot be dialed from that station.
   - d. The charges specified herein are not applicable to those specific stations arranged for toll diversion as of October 15, 1962 for systems installed prior to April 18, 1961.
   - e. Charges
     - (1) The charges indicated below are in addition to the regular charges for stations.
     - (2) Centrex I and Centrex II stations, excluding Centrex I-CO residence stations:

(a) Charges

	Installation Charge	Monthly Charge
Up to and including 100 stations equipped for toll diversion	-	$50.00
Additional Stations, each	$ 8.80 (I)	0.50

If the customer has both classes of toll diversion as described in b. preceding, the above charges apply for each class of toll diversion.

* Not applicable if installed at the same time as the P.B.X. System or at the same time a P.B.X. Station is added.

(b) Initial Contract Period and Termination Charges

The initial contract period for the initial 100 stations or less for each class of toll diversion is three years.
Termination charges applicable in the event of discontinuance of a class of toll diversion prior to the expiration of the initial contract period shall be an amount equal to 50% of the unbilled monthly charges for the initial 100 stations (or less) for the unexpired portion of the contract period.

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Detroit, Michigan

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Exhibit 41C

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TRANS. TO COMPT. OFFRS.

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

SPECIAL P.B.X. FEATURES

A. TOLL DIVERSION ARRANGEMENTS (Continued)

3. Type II: (Formerly Type III - Previous Type II now combined with Type I) (Continued)
    - e. Charges (Continued)
        - (3) Centrex I-CO Residence Stations (C)
            - (a) At the time service is established and at the beginning of a new school year, term, or semester no charge is applicable to provide or to remove Toll Diversion on residence centrex stations.
            - (b) Provision of Toll Diversion at a time other than specified in (a) preceding. A nonrecurring charge of $2.50 applies for each station changed to Toll Diversion, except that no charge is applicable where the Telephone Company initiates such a change involving a delinquent account under the Special Toll Billing Arrangement.
            - (c) Removal of Toll Diversion at a time other than specified in (a) preceding. No charge is applicable for removal of Toll Diversion except as indicated in the following:
              Where the Telephone Company has placed the service on Toll Diversion because of a delinquent account and subsequently the account is reinstated for the Special Toll Billing Arrangement a nonrecurring charge of $2.50 applies for the removal of Toll Diversion. (C)

B. MESSAGE WAITING SERVICE

1. Message Waiting Service is available where facility conditions permit on either dial or manual P.B.X. systems.
2. This feature consists of a neon lamp mounted on a desk type telephone instrument or a Princess telephone set which lights upon operation of a key contained in an appropriate cabinet, located near the P.B.X. operator. When the lamp is lit it indicates that there is a message waiting for the station user.
3. Charges -
    - a. The charges indicated below are in addition to all charges applicable to the class and type of telephone service with which the feature is associated, for Princess telephone sets and for any miscellaneous services provided.

	Installation Charge	Monthly Charge
b. Common Equipment, each System	$100.00	$25.00
c. Each P.B.X. dial station equipped	8.80#(I)	.25

    # The installation charge is not applicable when message waiting service is installed at the same time as message registers and toll diversion or at the time a P.B.X. station is installed. (T)
    - d. Initial Contract Period and Termination Charges
        - (1) The initial contract period is five years in the same building starting with the date service is established. Termination Charges will apply to the Common Equipment and the number of Message Waiting Features specified in the initial contract. In the event of complete discontinuance of this service prior to the expiration of the contract period a Termination Charge is applicable and shall be an amount equal to 50% of the unbilled charges for the unexpired portion of the contract period based on the charges in effect at the time the contract period began.
        - (2) Where a contract for this service is cancelled after the installation of the required equipment and facilities is completed, but before service is established, the Termination Charge shall be applicable as specified above.
        - (3) Where a contract is cancelled before installation is completed, a termination charge consisting of the loss on equipment and facilities in the process of building or being installed, the installation labor, the labor cost of removal and other expenses not to exceed 50% of the unbilled charges for the 5-year period, shall be applicable.
    - e. Moves -
      For a move of a cabinet housing the message waiting keys or a move of the common equipment, charges Based on Cost apply.

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By L. J. Haynes, Vice President
Detroit, Michigan

E580

Exhibit 41C

ADV. #400 FILED WITH M.P.S.C. 7/2/70
TRANS. TO COMPT. OPERS. 7/2/70

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

7. Residence Stations are furnished to the college or university upon the condition that use of the service shall not be made subject to any charge by the college or university in excess of the charges of the Telephone Company.

8. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations - Monthly Charges
(1) Regular Service
(a) Business Stations
(i) Flat Rate Service

	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$6.50	$7.50	$8.50
Next 250 Stations, each	5.75	6.50	7.50
Next 500 Stations, each	5.50	6.00	6.75
All Addl. Stations, each	5.25	5.50	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(ii) Measured Rate Service

	Detroit Zone
First 250 Stations, each	$7.75
Next 250 Stations, each	6.75
Next 500 Stations, each	5.75
All Addl. Stations, each	4.75

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(b) Residence Stations

(i) Non-restricted residence stations are provided at a charge which is $0.20 less than the charge for Residence Individual Line Flat Rate Service in the various Exchanges and Zones as specified in Tariff M.P.S.C. No. 1. This charge provides the same Local Service Area calling privileges and message unit charges as is applicable for Individual Line Flat Rate Service.

Special Toll Billing Arrangement (Temporary Experimental Offering until December 31, 1970 in the Marquette and Houghton Exchanges).

For residence stations provided for students in dormitories where the Telephone Company assumes the responsibility of collecting from the individual users and bills toll charges directly to the stations a special toll billing arrangement charge of $0.20 applies for each statement rendered.

(ii) Restricted residence stations are provided at a charge of $3.25 each per month.

(2) Metropolitan Service

First 250 Stations, each	$10.25	(C)
Next 250 Stations, each	9.25	
Next 500 Stations, each	8.25	
All Addl. Stations, each	7.25	

A charge of $.05 applies for messages to stations within the Local Service Area. (C) Exchanges and Zones where the service is available, Local Service Areas, and regulations are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1.

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By W. C. Patterson, Senior Vice President

E581

Exhibit 41C

ADV. #112 FILED WITH M.P.S.C. [illegible]

TRANS. TO COMPT. OPERS. 7/2/70

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Fifth Revised Sheet 39.2
Cancels Fourth Revised Sheet 39.2

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

A. CENTREX I - CO SYSTEMS (Continued)

8. Charges (Continued)

c. Service Connection Charges

	Schedules As Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
(1) Business Main Stations, each	$4.50	$5.00	$5.50	$6.00

(2) Residence Main Stations (Non-restricted and restricted)
Service Connection Charges as specified in Tariff M.P.S.C. No. 1 for residence service. No additional charge is applicable to change from non-restricted to restricted or vice versa.

d. Extension Stations, each

(1) Monthly Charges
(a) Business Stations
Flat Rate Service $3.50
Measured Rate Service and Metropolitan Service $3.25 (T)

(b) Residence Stations
Same charges as applicable for Residence Flat Rate Extension Stations.

(2) Service Connection Charges
(a) Business Stations
Service Connection Charges as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

(b) Residence Stations
Service Connection Charges as specified for residence extension stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

e. Minimum Charges

A Minimum monthly charge equal to the monthly charge for 250 Regular Service main stations, excluding charges for manual switching equipment, extension stations and channel charges, is applicable for each system.

f. Interbuilding Channel Charges

(1) Main Stations located in same central office (wire center) area in which the Dial Switching Equipment is located.
(a) Within Base Rate Area - No Mileage Charge
(b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area Boundary.

(2) Main Stations located in a different central office (wire center) area than the one in which the Dial Switching Equipment is located (Same Exchange or Zone).

	Per Channel, Per Month
(a) Option I	
(i) Detroit Zone	
(A) Terminals in same zone rate area	$ 5.00
(B) Terminals in adjacent zone rate area	10.00
(C) Terminals in nonadjacent zone rate areas	15.00
(ii) Company except Detroit Zone	5.00

(b) Option II
(i) Between the central office in which the Dial Switching Equipment is located and the premises in which the stations are located
(A) Basic Charge, per month $100.00
(B) Plus Channel Charges, each channel, per month 8.00

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E582

Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C. 7/2/70
TRANS. TO COMPT. O[illegible] 7/2/70

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Fifth Revised Sheet 39.4
Cancels Fourth Revised Sheet 39.4

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

B. CENTREX I - CU SYSTEMS (Continued)

5. Charges

	Installation Charge	Monthly Charge
a. Attendant Positions		
(1) Consoles, per position	$200.00	$150.00
(2) Switchboards		
(a) Same charges as specified for switchboards, except Universal Type, associated with Series 100 Systems		
(b) Universal Type, per position	250.00	175.00

b. Main Stations - Monthly Charges
(1) Regular Service

(a) Flat Rate Service	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Center Line Royal Oak Warren Zones
First 250 Stations, each	$6.30	$7.30	$8.25
Next 250 Stations, each	5.55	6.30	7.25
Next 500 Stations, each	5.30	5.80	6.50
All Addl. Stations, each	5.05	5.30	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Rate Service	Detroit Zone
First 250 Stations, each	$7.50
Next 250 Stations, each	6.50
Next 500 Stations, each	5.50
All Addl. Stations, each	4.50

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Metropolitan Service		
First 250 Stations, each	$10.00	(C)
Next 250 Stations, each	9.00	
Next 500 Stations, each	8.00	
All Addl. Stations each	7.00	

A charge of $.05 applies for messages to stations within the Local Service Area. (C)
Exchanges and Zones where the service is available, Local Service Areas, and regulations are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1.

c. Main Stations - Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Main Stations, each	$4.50	$5.00	$5.50	$6.00

d. Extension Stations, each
(1) Monthly Charges
Flat Rate Service $3.50
Message Rate Service and Metropolitan Service $3.25 (T)
(2) Service Connection Charges
Service Connection Charges apply as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

e. Minimum Charges
A Minimum Monthly Charge equal to the monthly charge for 250 Regular Service main stations, excluding charges for manual switching equipment, extension stations, and mileage charges, is applicable for each system.

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Detroit, Michigan

E583

Exhibit 41C

ADV. #122 FILED WITH M.P.S.C. 7-2-70
TRANS. TO COMPT. OFERS. 7/2/70

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Fifth Revised Sheet 39.6
Cancels Fourth Revised Sheet 39.6

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

C. CENTREX II - CO SYSTEMS (Continued)

4. The Telephone Company will furnish without charge one listing for a customer in the regular exchange directory in addition to a sublisting indicating that stations may be dialed directly if the number is known. Individual listings of stations are also provided wherein the department, title or individual name will be listed either as an indented listing under the main listing or in the regular alphabetical section at the charge specified for Extra Listings for business service in this Tariff.

5. Charges

a. Attendant Positions	Installation Charge	Monthly Charge
(1) Console, per position	$200.00	$150.00
(2) Switchboard (Universal Type), per position	250.00	175.00

b. Main Stations - Monthly Charges

(1) Regular Service

(a) Flat Rate Service	Rate Groups A, B, C and Farmington Livonia Romulus Trenton Wyandotte Zones	Rate Group D and Mayfair Roseville Southfield Wayne Troy Zones	Birmingham Royal Oak Center Line Warren Zones
First 250 Stations, each	$8.50	$9.50	$10.50
Next 250 Stations, each	7.00	7.75	8.75
Next 500 Stations, each	6.75	7.25	8.00
All Addl. Stations, each	6.50	6.75	7.25

The stations have the same Local Service Area calling privileges and message unit charges as specified for Flat Rate Business Service in Tariff M.P.S.C. No. 1 for the exchange or zone from which service is provided.

(b) Measured Rate Service	Detroit Zone
First 250 Stations, each	$9.75
Next 250 Stations, each	8.00
Next 500 Stations, each	7.00
All Addl. Stations, each	6.00

The stations have the same Local Service Area calling privileges and message unit charges as specified for Business Measured Service in the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Metropolitan Service	
First 250 Stations, each	$12.25
Next 250 Stations, each	10.50
Next 500 Stations, each	9.50
All Addl. Stations, each	8.50

(C)

(C)

A charge of $.05 applies for messages to stations within the Local Service Area. Exchanges and Zones where the service is available, Local Service Areas, and regulations are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1.

c. Main stations - Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Main stations, each	$4.50	$5.00	$5.50	$6.00

d. Extension Stations, each

(1) Monthly Charges

Flat Rate Service	$3.50
Measured Rate Service and Metropolitan Service	$3.25

(T)

(2) Service Connection Charges are as specified for P.B.X. stations in Tariff M.P.S.C. No. 1 - Service Connection Charges.

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Detroit, Michigan

E584
Exhibit 41C

ADV. #[illegible] FILED WITH M.P.S.C. 7/2/70
TRANS. TO COMM. [illegible] 7/2/70

Michigan Bell Telephone Co.
Tariff M.P.S.C. No. 2

Fifth Revised Sheet 39.9
Cancels Fourth Revised Sheet 39.9

AUXILIARY SERVICES AND EQUIPMENT

PRIVATE BRANCH EXCHANGE SYSTEMS

CENTREX DIAL P.B.X. SYSTEMS

D. CENTREX II - CU SYSTEMS (Continued)

5. Charges
   b. Main Stations - Monthly Charges (Continued)
      (1) Regular Service

(b) Measured Rate Service	Detroit Zone
First 250 Stations, each	$9.50
Next 250 Stations, each	7.75
Next 500 Stations, each	6.75
All Addl. Stations, each	5.75

The charges indicated above include the same Local Service Area calling privileges and message unit charges as specified for Individual Line Measured Business Service in Tariff M.P.S.C. No. 1 for the Detroit Zone except that there is no message unit allowance. All message units are charged for at $.042 each.

(2) Metropolitan Service

First 250 Stations, each	$12.00	(C)
Next 250 Stations, each	10.25	
Next 500 Stations, each	9.25	
All Addl. Stations, each	8.25	

A charge of $.05 applies for messages to stations within the Local Service Area. (C) Exchanges and Zones where the service is available, Local Service Areas, and regulations are as specified for Metropolitan Business Service in Tariff M.P.S.C. No. 1.

c. Main Stations - Service Connection Charges

	Schedules as Specified Under Service Connection Charges in Tariff M.P.S.C. No. 1			
	I	II	III	IV
Main Stations, each	$4.50	$5.00	$5.50	$6.00

d. Extension Stations, each

(1) Monthly Charges

Flat Rate Service	$3.50	
Message Rate Service and Metropolitan Service	$3.25	(T)

(2) Service Connection Charges are as specified for business extensions in Tariff M.P.S.C. No. 1 - Service Connection Charges.

e. Station instruments are provided in color as manufactured or in black without additional charge.

f. Minimum Charges

A minimum monthly charge equal to the monthly charge for 150 Regular Service main stations, excluding charges for manual switching equipment, extension stations, and channel charges, is applicable for each system.

g. Channel Charges

(1) Main Stations located in same central office area in which dial switching equipment is located:
   (a) Within Base Rate Area - No Mileage Charge.
   (b) Outside Base Rate Area - $0.75 per 1/4 mile or fraction, airline mileage per month, measured from the station location to the nearest point on the Base Rate Area boundary.

(2) Main Station located in a different central office area than the one in which the dial switching equipment is located (same exchange or zone):

Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

(3) Extension Stations:
Channel charges as specified for P.B.X. stations under Interbuilding Channel Charges in this Tariff.

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By W. C. Patterson, Senior Vice President
Detroit, Michigan

~~Due and timely~~ Service of ~~three (3)~~ one cop~~ies~~y of the within Exhibit Vol. 1 is hereby admitted this 2nd day of December, 1977

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UNITED STATES ATTORNEY

Robert B. Fiske Jr.
12/2/77 RF

Attorney for

12-5

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